

SPECIFICATIONS & BID FORM
FOR
NAUTILUS PIER WATER TAXI DOCK

GROTON, CONNECTICUT

Contract # 21-02

BID OPENING

DATE: October 8, 2020

TIME: 2:00 P.M. PREVAILING TIME

PLACE: TOWN HALL ANNEX
134 GROTON LONG POINT ROAD
(OPPOSITE FITCH HIGH SCHOOL)
GROTON, CONNECTICUT 06340

TOWN COUNCIL

PATRICE GRANATOSKY, MAYOR

PORTIA BORDELON
AUNDRE BUMGARDNER
RACHEL FRANCO
CONRAD F. HEEDE

JUAN MELENDEZ
LIAN OBREY
JULIETTE PARKER
JOE ZEPPIERI

TOWN MANAGER
JOHN BURT

DIRECTOR OF PUBLIC WORKS
GREG A. HANOVER

PREPARED BY
ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
TOWN OF GROTON, CONNECTICUT

BID DOCUMENT

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BID DOCUMENT

ADVERTISEMENT FOR BIDS
“NAUTILUS PIER WATER TAXI DOCK”

TOWN OF GROTON, CONNECTICUT
(Owner)

Sealed bids for "Nautilus Pier Water Taxi Dock" will be received by the Town of Groton at the Town Hall Annex, 134 Groton Long Point Road (across from R. E. Fitch High School) Groton, CT until 2:00 p.m., prevailing time, on October 8, 2020, and then at said office publicly opened and read aloud. Bids must be enclosed in a sealed envelope and designated as bid for “Nautilus Pier Water Taxi Dock ”.

Any bid may be withdrawn prior to the above scheduled time for opening of bids. Any bid received after the time and date specified will be returned unopened.

All Contract Documents may be examined at the following:

TOWN HALL ANNEX – 134 GROTON LONG POINT ROAD, GROTON, CT
PUBLIC WORKS DEPARTMENT

The contractor shall design, provide, and install a floating pier with an attached landing platform and an accessible gangway that connects existing fixed pier that services the Historic Ship NAUTILUS (SSN 571) to a new floating pier. The floating pier shall be anchored with a minimum of four (4) cantilever steel pipe piles. The new floating pier and gangway shall have electrical lighting, handrails, and 6ft swing gates at the top of the gangway.

Contract documents, including Plans and Specifications, are available on the Town of Groton Website: www.groton-ct.gov

The Town of Groton reserves the right to waive any formalities or to reject any or all bids.

A non-mandatory pre-bid meeting will be held at: Submarine Force Museum on September 14, 2020 at 1:30 p.m.

Each bidder must deposit, with his bid, security in the form of bid bond or certified check subject to the conditions provided in the Information for Bidders.

No bidder may withdraw his bid within 60 days after the actual date of the opening thereof.

Greg A. Hanover, P.E.
Director of Public Works
Town of Groton, Connecticut

The Town of Groton is An Equal Opportunity/Affirmative Action Employer.

INFORMATION FOR BIDDERS

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2. Method of Award
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INFORMATION FOR BIDDERS

1. Sealed Bids

Sealed bids for "Nautilus Pier Water Taxi Dock" will be received by the Town of Groton at the Town Hall Annex, 134 Groton Long Point Road, Groton, CT until 2:00 p.m. prevailing time on October 8, 2020, and then at said office publicly opened and read aloud. Bids must be enclosed in a sealed envelope and designated as bid for "Nautilus Pier Water Taxi Dock ". Any bid may be withdrawn prior to the above scheduled time for the opening of bids. Any bid received after the time and date specified will be returned unopened.

2. Method of Award

The Town of Groton intends to award the contract to the lowest responsible bidder. The Town reserves the right to reject any and all bids and to award each contract to the bidder who is most responsive to the interests of the Town.

If the lowest base bid submitted by a responsible bidder does not exceed the amount of funds then estimated by the Owner as available to finance the contract, the contract will be awarded on the base bid only. If such bid exceeds such amount, the Owner will reject all bids.

3. Bid Schedule

Bids must be made on these forms and returned intact. Bidders will state both in writing and in figures, in ink or typewritten, the proposed price for each separate item of the work called for in the bid schedule, by which prices will be compared. If any price is omitted, the blank shall be filled with the highest price named by any bidder for that item or the bid may be rejected. Alterations and erasures must be initialed by the signer.

4. Arithmetic Discrepancies

A. For the purpose of initial evaluation of bids, the following will be utilized in resolving arithmetic discrepancies found on the face of the bidding schedule as submitted by bidders:

1. Obviously misplaced decimal points will be corrected.
2. In case of discrepancy between unit price and extended price, the unit price will govern.
3. Apparent errors in extension of unit prices will be corrected.

4. Apparent errors in addition of lump sum and extended prices will be corrected.

B. For the purpose of bid evaluation, the Town will proceed on the assumption that the bidder intends his bid to be evaluated on the basis of the unit prices, extensions, and totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.

5. Bid Security

If the total amount of the bid submitted exceeds \$50,000, or if the bid contains any add alternates and the combination of the base bid plus all add alternates exceeds \$50,000, then the bid must be accompanied by a CERTIFIED CHECK or a BID BOND, signed by a responsible Surety, in the amount of 10% of the total amount of the tendered bid and made payable to the order of the Town of Groton. All bid checks or bonds, except those of the lower three (3) bidders will be returned within ten (10) days of the opening of bids. Those of the lower three (3) bidders will be retained by the Town of Groton until one of the lower three (3) bidders signs the contract or until all bids are rejected; however, in no case will the bid check or bond be retained for more than 60 days unless forfeited as hereinafter stipulated. No bidder may withdraw his bid within 60 days after the actual date of the opening thereof.

Should there be reasons why the CONTRACT cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

If the total amount of the bid (or base bid plus alternates) submitted is \$50,000 or less, then no bid security is required.

The Bid Bond and Surety's Letter of Intent must be provided by a Surety Company that meets all of the following qualifications as of the date of bid.

- A. Licensed to do business in the State of Connecticut
- B. Listed on the current U. S. Treasury "T" List
- C. Rate A- or better by A. M. Best

6. Qualifications of BIDDER

The OWNER may make such investigations as he deems necessary to determine the ability of the BIDDER to perform the work, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any bid if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the CONTRACT and to complete the work contemplated therein. Conditional bids

shall not be accepted. Any CONTRACTOR, who is in litigation or arbitration with the Town at the time of the bid opening, or prior to the execution of the CONTRACT, may be considered an unacceptable BIDDER and may be disqualified.

7. Identity of SUB-CONTRACTORS

If any portion of the work is to be performed by persons or entities not considered to be part of the bidder's own forces, the successful bidder shall, upon notification of the award of a contract, furnish a written list of such other persons or entities and a description of the work to be performed by them. If requested by the Owner, the successful bidder shall be required to establish, to the satisfaction of the Owner, the reliability and responsibility of such Sub-Contractors.

8. Bonds

A. **Performance Bond**

If the total bid price for the project exceeds **\$50,000**, or if the bid contains any alternates and the combination of the base bid plus all Town accepted alternates exceeds \$50,000, then either of the following is required:

1. The Contractor shall furnish a bond covering faithful performance of the Contract. Surety shall be qualified to do business in the State of Connecticut, listed on the current U. S. Treasury "T" list, and rated "A-" or better by A. M. Best. The cost of the bond premium shall be included in the Contract Sum. The amount of the bond shall be equal to 100 percent of the Contract Sum.

OR

2. In lieu of a Performance Bond, a security in a form acceptable to the Town (for example, letter of credit or an assigned passbook) in the amount of 100% of the Contract may be substituted.

The Contractor shall deliver the required security to the Owner on the date the agreement is entered into.

The Contractor shall require the attorney-in-fact, who executes the required bond on behalf of the surety, to affix thereto a certified and current copy of the power-of-attorney.

In the case where add alternates are part of the bid, and where acceptance of any alternates would cause the Contract Sum to exceed

the \$50,000 threshold, then the price of the alternate shall include the cost of the required bond or security.

B. Payment Bond

If the total bid price for the project exceeds **\$100,000**, or if the bid contains any alternates and the combination of the base bid plus all Town accepted alternates exceeds \$100,000, then either of the following is required:

1. The Contractor shall furnish a bond covering payment of obligations arising under the terms of the Contract. Surety shall be qualified to do business in the State of Connecticut, listed on the current U.S. Treasury "T" list, and rated "A-" or better by A.M. Best. The cost of the bond premium shall be included in the Contract Sum. The amount of the bond shall be equal to 100 percent of the Contract Sum.

OR

2. In lieu of a Payment Bond, a security in a form acceptable to the Town (for example, a letter of credit or an assigned passbook) in the amount of 100% of the Contract may be substituted.

The Contractor shall deliver the required security to the Owner on the date the Agreement is entered into.

The Contractor shall require the attorney-in-fact, who executes the required bond on behalf of the surety, to affix thereto a certified copy of the power-of-attorney.

In the case where add alternates are part of the bid, and where acceptance of any alternates would cause the Contract Sum to exceed the \$100,000 threshold, then the price of the alternate shall include the cost of the required bond or security.

If the total bid (or base bid plus alternates) for the project is \$100,000 or less, then in lieu of providing any security listed in Section 8.B, the Contractor can elect to substitute the following:

1. Provide certified lien waivers from each supplier and sub-contractor affirming that they have been paid for work and materials for which previous payment applications were issued by the Owner and payments received by the Contractor.

9. Non-Resident Contractor Guarantee Bonds

A Non-Resident Contractor is required to post a Guarantee Bond (form AU-766)

or Cash Bond (form AU-72) with the State of Connecticut Department of Revenue Services (DRS) in the amount of 5% of the total contract price. This Bond will secure payment for applicable taxes payable to the State related to this project. The State will issue a Certificate of Compliance once an acceptable bond has been submitted by the Non-Resident Contractor. This Certificate of Compliance must be provided by the Contractor to the Town prior to the release of the first progress payment under the Contract, or the Town must remit 5% of the total contract value directly to the State. This 5% is in addition to the Project retainage.

Special Notice SN2012(2), published by the State of Connecticut Department of Revenue Services, details the procedures and requirements regarding the Guarantee Bond or Cash Bond. The Special Notice and bond forms can be obtained at the State of Connecticut Department of Revenue Services webpage, www.ct.gov/DRS.

10. Insurance

The Contractor must provide a CERTIFICATE OF INSURANCE as specified in the General and Supplementary Conditions.

11. Receipt of Bonds & Insurance Certificates Prior to Signing Contract

The Contractor to whom the contract shall be awarded must file the requisite BONDS and CERTIFICATE OF INSURANCE as specified and any other forms and documents required by the specifications prior to signing of the contract, and within 21 days from the date of receipt of notification of said award.

12. Obligation of Bidder

Bidders, if requested, must be able to present evidence satisfactory to the Director of Public Works that they have been regularly engaged in the business of constructing such work as they propose to execute, and that they are fully prepared with the necessary capital, materials, and equipment to conduct the work to be contracted for, and to begin it promptly when ordered.

Prior to submitting his bid, the bidder must inspect the site and thoroughly read all plans, specifications and bid and contract documents. The failure or omission of any bidder to examine any form, instrument or document and to thoroughly examine the site shall in no way relieve any bidder from any obligations in respect to his bid.

13. Damages for Failure to Enter into Contract

The party to whom the CONTRACT is awarded will be required to execute the CONTRACT within thirty (30) calendar days from the date when Notice of Award is delivered to the BIDDER. In case of failure of the BIDDER to execute the CONTRACT, the OWNER may at his option, consider the BIDDER in default, in which case the bid

security accompanying the proposal shall become the property of the OWNER as liquidated damages and not as a penalty.

14. Execution of Contract and Notice to Proceed

The OWNER within twenty (20) days of receipt of acceptable PERFORMANCE BOND, PAYMENT BOND and CONTRACT signed by the party to whom the CONTRACT was awarded shall sign the CONTRACT and return to such party an executed duplicate of the CONTRACT. Should the OWNER not execute the CONTRACT within such period, the BIDDER may by written notice withdraw his signed CONTRACT. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The Notice to Proceed shall be issued within ten (10) days of the execution of the CONTRACT by the OWNER. Should there be reasons why the Notice to Proceed cannot be issued within such period; the time may be extended by mutual agreement between the OWNER and the CONTRACTOR. If the Notice to Proceed has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the CONTRACT, whereupon it shall become null and void and all rights and obligations created thereunder shall be extinguished.

15. Time of Completion and Liquidated Damages

BIDDER must agree to commence work on or before a date to be specified in a written Notice to Proceed from the OWNER and to fully complete the project within 200 consecutive calendar days thereafter. Bidder must agree also to pay as liquidated damages, the sum of \$200.00 for each consecutive calendar day thereafter as hereinafter provided in the GENERAL CONDITIONS.

It is hereby understood and mutually agreed, by and between the CONTRACTOR and the OWNER, that the date of beginning and the time for completion during the normal working hours as specified in the General Conditions of the work to be done hereunder are essential conditions of this CONTRACT; and it is further mutually understood and agreed that the work embraced in this CONTRACT shall be commenced on a date to be specified in the "Notice to Proceed".

The CONTRACTOR agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the time for the completion of the work described herein is a reasonable time for the completion of same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

If the said CONTRACTOR shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extensions thereof granted by the OWNER, then the CONTRACTOR does hereby agree, as a part consideration for the awarding of this CONTRACT, to pay to the OWNER the amount specified in the Information for Bidders, not as a penalty but as liquidated damages for such breach of CONTRACT as hereinafter

set forth, for each and every calendar day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT for completion of the work.

The said amount is fixed and agreed upon by and between the CONTRACTOR and the OWNER because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the OWNER would in such event sustain, and said amount is agreed to be the amount of damages which the OWNER would sustain and said amount shall be retained from time to time by the OWNER from current periodic estimates.

It is further agreed that time is of the essence of each and every portion of this CONTRACT and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the CONTRACT an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this CONTRACT. The CONTRACTOR shall not be in default when the delay in completion of the work is due:

- A. To any preference, priority or allocation order duly issued by the State or Federal Government
- B. To unforeseeable cause beyond the control and without the fault or negligence of the CONTRACTOR, including, but not limited to, acts of God, or of the public enemy, acts of the OWNER, acts of another contractor in the performance of a contract with the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and severe weather.

The CONTRACTOR shall, within ten (10) days from the beginning of any such delay, unless the OWNER shall grant a further period of time prior to the date of final settlement of the CONTRACT, notify the OWNER, in writing, of the causes of the delay. The Owner shall ascertain the facts and extent of the delay and notify the CONTRACTOR within a reasonable time of its decision in the matter.

16. Addenda and Interpretations

All questions about the meaning or intent of the Contract Documents are to be directed to the Owner. Interpretations or clarifications considered necessary by the Owner in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by the Owner as having received the Bidding Documents. Questions received less than seven days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

Addenda will be issued to modify the Bidding Documents as deemed advisable by the Owner.

17. Substitution Clause

Wherever in the Plans and Specifications any item of equipment or material is designed by reference to a particular brand, manufacturer, or trade name, it is understood that an approved equal product, acceptable to the OWNER, may be substituted by the BIDDER or the CONTRACTOR.

18. Retainage

The Town of Groton reserves the right to retain 5% of the final contract price for a period not to exceed six (6) months from the date of final acceptance of the project.

19. Laws and Regulations

The bidder's attention is directed to the fact that all applicable Federal and State law, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

20. Utilities in the Area

Verify on-site utilities and have them marked out by a utility locator service prior to the start of construction. Where existing piping, utilities, oil and gas lines, and underground obstructions of any type that are to remain are indicated in locations to be traversed by new piping, ducts, and other work provided herein, and such are not indicated or specified to be removed, the elevations of the existing utilities and obstructions shall be determined before the new work is laid.

When requested by the Contractor, all underground utilities will be located and marked on the surface by the controlling utility company at no cost to him. Contractor will be responsible for notifying the Utility clearinghouse; "Call-Before-You-Dig" 48 hours prior to any work, to allow for the location of the existing utilities by controlling Utility Company.

21. Sales Tax

Under the terms of the regulations referring to CONTRACTORS and SUBCONTRACTORS, issued by the STATE TAX COMMISSION in administration of the STATE Sales and Use Tax, to which the BIDDER is referred, the CONTRACTOR may purchase materials or supplies to be consumed in the performance of this contract without payment of tax and shall not include in his bid nor charge any use or sales tax thereon.

22. Site Investigation and Conditions Affecting the Work

Arrangements to visit the site may be made by calling the Public Works Department Engineering Division, (860) 448-4066, Monday through Friday, 8:30 a.m. to 3:30 p.m.

- A. The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to:
1. Conditions bearing upon transportation, disposal, handling, and storage of materials;
 2. The availability of labor, water, electric power, and roads;
 3. Uncertainties of weather, river stages, tides, or similar physical conditions at the site;
 4. The conformation and conditions of the ground; and
 5. The character of equipment and facilities needed preliminary to and during work performance.
- B. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Town, as well from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Town.
- C. The Town assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Town. Nor does the Town assume responsibility for any understanding reached or representation made concerning conditions, which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this Contract.
- D. The Contract Documents contain the provisions required for the construction of the project. Information obtained from an officer, agent or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the CONTRACT.

23. Permits

The Contractor must obtain all necessary construction and building permits; however, the fee for any permits issued by the Town of Groton shall be waived.

24. Work Area

Construction will be confined to the immediate work area only or as directed by the Engineer.

25. Change Orders

Any deviations from, additions to, or deductions from either scope of work or contract price shall be submitted by the Contractor to the Town in the form of a contract change order. The Director of Public Works must approve this contract change order before said deviations, additions, or deductions shall be enacted.

Further, all changes in scope of work involving unit price items shall be governed by the unit price indicated by the Contractor on the Base Bid Form.

26. Wages

Bidder is directed to Paragraph 45 of the General Conditions for wage rate scales and legislation applicable to this contract.

27. Unbalanced Bids

An unbalanced bid is one in which the contractor's unit prices are:

- a. Significantly higher or lower than the Engineer's estimate.
- b. "Front loaded" so contractor receives a disproportionate payment for work done during the early stages of a project.
- c. Token bid prices (i.e. penny unit bids).

While it is often impossible to designate precisely the dividing line between a balanced bid and an unbalanced bid, contractors should be aware that the Department may regard the unbalancing of a bid as so extreme, undeniable, or detrimental to the interests of the Town that it may question the contractor about the apparent unbalancing of the bid proposal, and, if the contractor cannot provide a satisfactory explanation of the apparent unbalancing, and if the Department's assessment of the risk to the Town is unacceptable, reject the bid as nonresponsive.

28. OSHA Violations

In accordance with Connecticut General Statute Section 31-57b, no contract shall be awarded to a bidder if it is determined that the bidder (person or firm) has been cited for three (3) or more willful or serious violations of any occupational safety and health act or of any standard, order or regulation promulgated pursuant to such act during the three (3) year period preceding the date of bid opening.

29. Local Vendor Preference

The Town of Groton has adopted a policy of providing preference to selecting Local Vendors as outlined in this section. The term “Local Vendor” as used in this section shall mean, and be used interchangeably with, “Bidder” and “Contractor”.

- A. *Definition:* The term “Local Vendor” shall mean a company, firm, LLC, partnership, sole proprietorship or similar business with its principal place of business located within the Town of Groton. A business shall not be considered a local vendor unless satisfactory evidence has been submitted with the bid that clearly establishes that it has a bona fide principal place of business, including branches or satellite offices, in the Town of Groton. Such documentation shall include evidence of ownership such as real estate and personal property bills, a lease agreement for the real estate from which the principal place of business operates, copies of deeds, or copies of paid real estate and personal property bills.
- B. *Application:* To be considered, and be given preference as a local vendor, the bidder must complete and submit with their bid, a local vendor registration form together with copies of any of the documents listed above in paragraph A. A local vendor registration form submitted after bids are opened will not be considered.
- C. *Implementation:* If the total bid amount, together with any add or deduct alternates the Town wishes to accept, submitted by a qualified responsive Local Vendor is not more than five percent (5%) higher than the lowest bid, then the Town has the right to award the contract to the local vendor provided he agrees to match the lowest bid.

In the instance of two or more Local Vendors being within the 5% threshold, then the qualified responsive local vendor with the lowest actual bid will be given the first opportunity to match the low bid.

For bids involving unit prices, and when the qualified responsive local vendor agrees to match the low total bid amount, he must also submit updated individual unit prices showing the total amount to meet the low bid. The Town of Groton reserves the right to approve or disapprove which unit prices are used to net the total bid amount.

- D. *Notification:* When a local vendor meets the criteria for submitting a successful bid and has provided all of the required documentation, a letter signed by the Public Works Director will be sent to the local vendor. The letter will notify the local vendor that they have met all of the criteria of this provision and will formally request that they respond in writing to the Town **within five (5) business days** that they are willing to match the lowest price bid. In the case of bids with unit prices, the local vendor must also include a revised list of unit prices. Once the local vendor has agreed to match the low bid and all other conditions of a successful bid have been met, the contract will be awarded to the local vendor.

E. *Exemptions:* Any bid made under the following are exempt from this section:

- a. Projects utilizing any Federal or State of Connecticut funds or grants
- b. Projects utilizing any special grant that stipulates the award must be made to the lowest qualified bidder

TOWN OF GROTON
LOCAL VENDOR REGISTRATION
AFFIDAVIT OF ELIGIBILITY

Legal Name of Business:_____

Business Type: ☐Corporation ☐LLC ☐Partnership ☐Sole Proprietorship ☐Other

Physical Groton Address:_____

Mailing Address (if different):_____

City:_____ State:_____ Zip Code:_____

Owner/Principal Name:_____

Phone:_____ E-Mail:_____

Supporting Documentation Attached (check one):

- ☐ Copy of cancelled check for payment of real estate or personal property taxes
- ☐ Copy of long term lease of the real estate from which the business is operated
- ☐ Copy of deed
- ☐ Other:_____

Under penalty of perjury, the undersigned states that the foregoing statements are true and correct.

Authorized Signature:_____

Date:_____

Printed Name:_____

Title:_____

Personally appeared, _____
owner/principal of

_____, signer and sealer of the
foregoing instrument and acknowledged the truth of the foregoing before me on the ____ day
of _____ in the year _____

Notary Public
My Commission expires:_____

END OF SECTION

**PROPOSAL
NAUTILUS PIER WATER TAXI DOCK**

Proposal of _____ hereinafter called "BIDDER"

*a corporation of the State of

*a partnership, or

*an individual doing business as

To the Town of Groton, Connecticut

Gentlemen:

The undersigned hereby declares that no person or persons other than those named herein are interested in this proposal or in the Contract proposed to be taken; that it is made without any connection with any other person making any proposal for the same work, and is in all respects fair and without collusion or fraud; that no person acting for or employed by the Town of Groton is directly interested therein, or in the supplies or works to which it relates, or in any portion of the profits thereof; that it is understood that the Town, its agents and employees are not to be in any manner held responsible for the accuracy of, or bound by, the estimates or borings or plan of borings relative to the work and appearing on plans or in the foregoing notice; and that all such estimates, etc., are to be considered solely for the purpose of filling out and comparing the several proposals.

The undersigned further declares that he has carefully examined the Information For Bidders, Contract documents, including the Plans and Specifications, and has inspected the site and will contract to provide all necessary tools, apparatus and implements, freight, cartage, and expense, and to do all the work and furnish all the materials necessary in the manner and upon the conditions specified and upon the following terms at the prices specified on the following pages.

The undersigned agrees to furnish satisfactory bonds and insurance as required by Paragraph 1 of the General Conditions, Section 8, 9, 10 and 11 of the Information for Bidders and by the Supplementary Conditions Section 1, and to execute within 30 days after notice of the award, a formal contract with the Town of Groton for the fulfillment of this proposal, and it is agreed that in case of failure on the part of the undersigned to do so, the certified check or bid bond deposited herewith shall be forfeited to the Town of Groton as liquidated damages for such failure.

BIDDER hereby agrees to commence work under this contract on or before a date to be specified in written NOTICE TO PROCEED of the OWNER and to fully complete the project in strict compliance with the Contract Documents within 200 consecutive calendar days thereafter as stipulated in the specifications. BIDDER further agrees to pay as liquidated damages, the sum of \$200.00 for each consecutive calendar day thereafter as hereinafter provided in Paragraph 15 of the Information for Bidders.

BIDDER acknowledges receipt of the following addendum:

The undersigned further agrees, in case of a corporation or fictitious trade name, that an acceptable certificate will be filed showing the proper officer or person authorized to sign said contract.

Amounts are to be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.

The price shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any formalities in the bidding.

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

The bid Security attached in the sum of:

_____ dollars (\$_____)

is to become the property of the Owner in the event the Contract and Contract Bonds are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

**NAUTILUS PIER WATER TAXI DOCK
GROTON, CONNECTICUT**

NOTE: Price shall be written in ink or typewritten, in words and in figures. In case of discrepancy, words will take precedence over numbers.

THE TOTAL LUMP SUM BASE BID AS COMPUTED BY THE BIDDER, TO COMPLETE
THE PROJECT AS SPECIFIED:

IN FIGURES: _____

IN WORDS: _____

The undersigned offers the following information as evidence of his qualifications to perform the work as bid upon according to all requirements of the Plans and Specifications.

1. Have been in business under present business name: _____years.
 2. Ever failed to complete any work?
 3. List the more important contracts recently completed by you, stating approximate cost for each, and the month and year completed.
 - a. Location_____
 - Project/Phone#_____
 - Engineer/Phone#_____
 - Completion Date_____
 - Amount of Contract_____
 - b. Location_____
 - Project/Phone#_____
 - Engineer/Phone#_____
 - Completion Date_____
 - Amount of Contract_____
 - c. Location_____
 - Project/Phone#_____
 - Engineer/Phone#_____
 - Completion Date_____
 - Amount of Contract_____
 4. Bank Reference/Phone#_____
-

This firm consists of the following members:

Full Name

Residence

The officers are:

Full Name

Residence

President: _____

Treasurer: _____

Directors: _____

Respectfully Submitted:

SEAL: (If bid is by a Corporation)

(Firm Name)

By: _____
(Signature)

(Typed Name and Title)

(Business Address)

(Telephone)

(Fax)

(Email)

(ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION)

STATE OF _____

SS:

COUNTY OF _____

ON THIS _____ DAY OF _____, 2020, BEFORE ME PERSONALLY CAME AND APPEARED _____, TO ME KNOWN, WHO, BEING BY ME DULY SWORN, DID DEPOSE AND SAY THAT HE RESIDES AT _____, THAT HE IS THE _____ OF _____, THE CORPORATION DESCRIBED IN AND WHICH EXECUTED THE FOREGOING INSTRUMENT THAT HE KNOWS THE SEAL OF SAID CORPORATION - THAT ONE OF THE IMPRESSIONS AFFIXED TO SAID INSTRUMENT IS AN IMPRESSION OF SUCH SEAL - THAT IT WAS SO AFFIXED BY ORDER OF THE DIRECTORS OF SAID CORPORATION, AND THAT HE SIGNED HIS NAME THERETO BY LIKE ORDER.

(SEAL)

(NOTARY PUBLIC)

(ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP)

STATE OF _____

SS:

COUNTY OF _____

ON THIS _____ DAY OF _____, 2020, BEFORE ME PERSONALLY CAME AND APPEARED _____, TO ME KNOWN AND KNOWN TO ME TO BE ONE OF THE MEMBERS OF THE FIRM OF _____ DESCRIBED IN AND WHO EXECUTED THE SAME AS AND FOR THE ACT AND DEED OF SAID FIRM.

(SEAL)

(NOTARY PUBLIC)

(ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL)

STATE OF _____

SS:

COUNTY OF _____

ON THIS _____ DAY OF _____, 2020, BEFORE ME PERSONALLY CAME AND APPEARED _____ TO ME KNOWN AND KNOWN TO ME TO BE THE PERSON DESCRIBED IN AND WHO EXECUTED THE SAME.

(SEAL)

(NOTARY PUBLIC)

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____

_____ as Principal, and _____

as Surety, are hereby held and firmly bound unto The Town of Groton as owner in the penal sum of _____ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed this _____ day of _____, 2020

The condition of the above obligation is such that whereas the Principal has submitted to The Town of Groton a certain bid, attached hereto and hereby made a part hereof to enter into a contract in writing for the

NOW, THEREFORE,

- A. If said Bid shall be rejected, or in the alternate,
- B. If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto, properly completed in accordance with said Bid, and shall furnish a bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall provide the required evidence of insurance,

THEN, this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____(L.S.)

(Surety)

By:

SEAL:

**TOWN OF GROTON
CONTRACT # 21-02**

This Contract is entered into this ____ day of _____, 2020, between the TOWN OF GROTON, hereinafter called the TOWN and _____ hereinafter called the CONTRACTOR, whereby the CONTRACTOR agrees to complete the work on the project entitled _____ in accordance with the contract documents which consist of the Instructions to Bidders, the Proposal, General and Supplementary Conditions, plans and specifications and which are hereby made part of this Contract. The CONTRACTOR agrees to carry on the work with diligence and dispatch, and to furnish such equipment and labor as is consistent with good construction practice and furnish the completed project to the TOWN in a good and usable condition.

The TOWN agrees that it will pay the CONTRACTOR as specified in the Specifications and the Proposal, and upon satisfactory completion of the work, it will accept the project. After completion of the project, and acceptance by the TOWN the CONTRACTOR shall submit an itemized final estimate. No later than 31 days after acceptance of the final estimate by the TOWN, the TOWN shall pay 95% of the Contract price. No later than six (6) months after acceptance of the final estimate, the TOWN will pay the 5% retained, unless in that time the materials or workmanship in the project shall have been found to be defective.

The total payment will be

(\$_____).

Signed at Groton, Connecticut this ____ day of _____, 2020

For the CONTRACTOR

FOR TOWN OF GROTON

John Burt
Town Manager

Cindy R. Landry
Director of Finance

Greg A. Hanover
Director of Public Works

PAYMENT BOND

Bond # _____

KNOW ALL MEN BY THESE PRESENTS:

That we _____
(Name of Contractor)
a _____ hereinafter called "Principal" and
(corporation, partnership or individual)
_____, of _____, State of _____,
(Surety)
hereinafter called "Surety" are held and firmly bound unto _____,
(Owner)
of _____, hereinafter called "Owner", in the penal sum of
_____ Dollars
(\$ _____) in lawful money of the United States, for the payment of
which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and
successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered
into a certain contract with the Owner, dated the _____ day of _____, 2020, a
copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the Principal shall make payment to all persons, firms,
subcontractors, and corporations furnishing materials for or performing labor in the prosecution
of the work provided for in such contract, and any authorized extension or modification thereof,
including all amounts due for materials, lubricants, oil, gasoline, coal and coke consumed, repairs
on machinery, equipment and tools, or insurance premiums on said work, and for all labor,
performed in such work whether by subcontractor or otherwise, then this obligation shall be void;
otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and
agrees that no change, extension of time, alteration or addition to the terms of the contract or to
the work to be performed thereunder or the specifications accompanying the same shall in any
way affect its obligation on this bond, and it does hereby waive notice of any such change,
extension of time, alteration or addition to the terms of the contract or to the work or to the
specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

PROVIDED, FURTHER, that the provisions of Sec. 49-41a of the Connecticut General Statutes are incorporated herein and made a part hereof. Any provision of this bond contrary to such statutory provisions shall not be enforceable.

IN WITNESS, WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this the ____ day of _____, 2020.

		_____ Principal
ATTEST:		
_____ (Principal) Secretary	By	_____(S)
(SEAL)		_____ (Address - Zip Code)
_____ Witness as to Principal		
_____ (Address - Zip Code)		
ATTEST:		_____ Surety
_____ (Surety) Secretary	By	_____(S)
		Attorney-in-Fact
(SEAL)		_____ (Address - Zip Code)
_____ Witness as to Surety		
_____ (Address - Zip Code)		

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

PERFORMANCE BOND

Bond # _____

KNOW ALL MEN BY THESE PRESENTS:

That we _____
(Name of Contractor)
a _____ hereinafter called "Principal" and
(corporation, partnership or individual)
_____ of _____, State of _____,
(Surety)
hereinafter called the "Surety", are held and firmly bound unto _____
(Owner)
of _____, hereinafter called "Owner", in the
penal sum of _____ Dollars
(\$ _____) in lawful money of the United States, for the payment of
which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and
successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered in a
certain contract with the Owner, dated the _____ day of _____, 2020, a copy
of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties,
all the undertakings, covenants, terms, conditions, and agreements of said contract during the
original term thereof, and any extensions thereof which may be granted by the Owner, with or
without notice to the Surety, and if he shall satisfy all claims and demands incurred under such
contract, and shall fully indemnify and save harmless the Owner from all costs and damages
which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all
outlay and expense which the Owner may incur in making good any default, then this obligation
shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for such value received hereby stipulates
and agrees that no change, extension of time, alteration or addition to the terms of the contract or
to the work shall in any way affect its obligation on this bond, and it does hereby waive notice of
any such change, extension of time, alteration or addition to the terms of the contract or to the
work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied. IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each of which shall be deemed an original, this the _____ day of _____, 2020.

Principal

ATTEST:

(Principal) Secretary

By _____(S)

(SEAL)

(Address - Zip Code)

Witness as to Principal

(Address - Zip Code)

ATTEST:

Surety

(Surety) Secretary

By _____(S)

Attorney-in-Fact

(SEAL)

(Address - Zip Code)

Witness as to Surety

(Address - Zip Code)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute Bond.

GENERAL CONDITIONS

1. Insurance Requirements
2. Town Representation
3. Contractor Field Supervision
4. Engineering
5. Contract Drawings, Maps and Specifications
6. Utility Relocation
7. Sanitary Facilities
8. Pre-Construction Meeting
9. Construction Meetings
10. Quantities
11. Differing Site Conditions
12. Reports
13. Eliminated Items
14. Work Stoppages
15. Protection of Existing Structures, Equipment, Utilities & Improvements
16. Engineer
17. Progress Payments
18. General Guaranty
19. Daily Clean Up
20. Nondiscrimination
21. Extra Work
22. Samples
23. Quality of Equipment and Materials
24. Shop or Setting Drawings
25. Plans & Specifications at the Site
26. Materials, Services and Facilities
27. Contractor's Title to Materials
28. Inspection of Construction
29. Inspection and Testing of Materials
30. Contractor's Obligation
31. Weather Conditions
32. Provisions Required by Law Deemed Inserted
33. Right of the Owner to Terminate Contract
34. Acceptance of Final Payment Constitutes Release
35. Assignment
36. Codes, Regulations and Issue Date of Standard Specifications
37. Emergency Telephone Number
38. Other Contracts
39. The Owner's Duties and Rights
40. Wage Rates
41. Contract Bid Breakdown (Lump Sum)
42. Work Hours, Access, and Passes
43. Waste Disposal

1. Insurance Requirements

The Contractor must carry insurance under which both the Town and United States Navy are ADDITIONAL INSURED. Such insurance must be by insurance companies licensed to write such insurance in Connecticut against the risks and for no less than the minimum amounts and duration's as set forth in the SUPPLEMENTARY CONDITIONS, Section 1.

2. Town Representation

The Town will be represented at all times by the Director of Public Works or an authorized representative of the Public Works Department. They shall have the responsibility and authority for the interpretation of the Contract, its specifications and drawings.

3. Contractor Field Supervision

The Contractor must have a competent Field Supervisor on the job during all working hours. His name and address shall be available to the Town for after-hour emergencies.

4. Engineering

Inspection shall be provided by the Engineering Division of the Public Works Department. No field changes shall be allowed without specific notification of and approval by the Owner. Any changes will be recorded on prints and initialed by the Construction Observer.

5. Contract Drawings, Maps and Specifications

- A. Omissions from the drawings or specifications or the mis-description of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or mis-described details of the work but they shall be performed as if fully and correctly set forth and described in the drawings and specifications.
- B. The Contractor shall check all drawings furnished him immediately upon their receipt and shall promptly notify the Owner of any discrepancies. Figures marked on drawings shall in general be followed in preference to scale measurements. The Contractor shall compare all drawings and verify the figures before laying out the work and will be responsible for any errors which might have been avoided thereby.

- C. Any discrepancies found between the Drawings and Specifications and site conditions or any errors or omissions in the Drawings or Specifications shall be immediately reported to the DIRECTOR OF PUBLIC WORKS in writing, who shall promptly correct such error or omission in writing. Any work done by the CONTRACTOR after his discovery of such discrepancies, errors or omissions without notifying the DIRECTOR OF PUBLIC WORKS shall be done at the CONTRACTOR'S risk.
- D. Further instructions may be issued by the DIRECTOR OF PUBLIC WORKS during the progress of the work by means of Drawings or oral or written instruction to make more clear or specific the Drawings and Specifications or as may be necessary to explain or illustrate changes in the work to be done. The CONTRACTOR shall carry out the work in accordance with the additional Drawings and instructions.

6. Utility Relocation

All temporary utility relocations encountered shall be the responsibility of the Contractor and all labor and materials shall be included in his general expense. All permanent utility relocations listed on the drawings or as directed by the Town shall be paid for by the Town.

7. Sanitary Facilities

The Contractor shall provide temporary sanitary facilities for his employees. These facilities shall be cleaned regularly and in all ways comply with the State, Town and Navy Health Regulations.

8. Pre-Construction Meeting

The Owner will conduct a pre-construction meeting with the selected Contractor. The purpose of the meeting will be to answer any questions the Contractor may have about scheduling, the scope of work, the methods of work to be applied, and/or other technical or contractual issues.

9. Construction Meetings

To enable orderly review during progress of the Work and to provide for systematic discussion of problems, the Owner will conduct project meetings throughout the construction period. Persons designated by the Contractor to attend and participate in the project meetings shall have all required authority to commit the Contractor to solutions agreed upon in the project meetings.

10. Quantities

The estimated quantities of work to be done and materials to be furnished under this Contract, are provided only for use in comparing bids and to indicate the approximate total amount of the Contract.

11. Differing Site Conditions

- A. The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Owner of:
 - 1. Subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or
 - 2. Unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and provided for in the Contract.
- B. The Owner shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this Contract, whether or not changes as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.
- C. No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required.
- D. No request by the Contractor for an equitable adjustment to the Contract for differing site conditions shall be allowed if made after final payment under this contract.

12. Reports

The Contractor and each of his subcontractors shall submit to the Town, such schedules of quantities and costs, progress reports, payrolls, estimates, delivery tickets and other data as the Town may request.

13. Eliminated Items

Should any items contained in the proposal be found unnecessary for the proper completion of the contracted work, or if due to over expenditure on other contract items; the Owner may eliminate certain items from the Contract. Such action shall in no way invalidate the Contract and no allowance will be made for such items in making final

payment except for such work already completed or materials previously purchased for those items.

14. Work Stoppages

Should the Town be prevented or enjoined from proceeding with work either before or after the start of construction by reason of any litigation or other reason beyond the control of the Town, the Contractor shall not be entitled to or assert claim for damage by reason of said delay. However, time for completion of the work will be extended to such reasonable time as the Town may determine. Such time extension will be set forth in writing.

15. Protection of Existing Structures, Equipment, Utilities, and Improvements

- A. The Contractor shall preserve and protect all structures and equipment on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract.
- B. The Contractor shall protect from damage all existing improvements and utilities (1) at or near the work site and (2) on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Owner may have the necessary work performed and charge the cost to the Contractor.

16. Engineer

The term "Engineer" shall mean the duly authorized representative of the Public Works Department.

17. Progress Payments

On the first of each month, the Contractor may submit but not more than once each month, a Request for Payment for work done. The CONTRACTOR shall furnish the OWNER all reasonable facilities required for obtaining the necessary information relative to the progress and execution of the work. He must, if requested by the Owner, submit satisfactory evidence that he has paid in full for all labor, materials, and equipment included in the monthly estimate. The estimates shall be made on forms furnished by the Town and the Contractor shall certify that the estimate is correct and the work performed is in conformity with the plans and specifications.

Within fifteen (15) days from the date of approval of a Request for Payment by the OWNER, the TOWN shall:

- A. Pay the Request for Payment as approved less a five percent (5%) retainage.

- B. Approve such other amount as he shall decide is due the CONTRACTOR, informing the CONTRACTOR in writing of his reasons for approving the amended amount, or
- C. Withhold payment in whole or in part on a approved Request for Payment to the extent necessary to protect itself from loss on account of any of the following causes discovered subsequent to approval of Request for Payment by the OWNER provided he informs the CONTRACTOR in writing of his reasons for withholding payment in whole or in part:
 - 1. Defective work.
 - 2. Evidence indicating the probable filing of claims by other parties against the CONTRACTOR.
 - 3. Failure of the CONTRACTOR to make payments to SUBCONTRACTORS, material suppliers or labor.
 - 4. Damage to another CONTRACTOR.

After completion of the project and acceptance by the Town, the Contractor shall submit an itemized final estimate. No later than six (6) months after acceptance of the final estimate, the Town shall pay the 5% retained, unless, within that time, the materials or workmanship in the project have been found defective. The Contractor agrees that the OWNER may expend the same in making such repairs or replacements of said work as the OWNER may deem expedient upon proper notification in writing to the Contractor.

18. General Guaranty

Neither the final certificate of payment nor any provision in the contract documents, nor partial or entire occupancy of the premises by the Owner, shall constitute an acceptance of work not done in accordance with the contract documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom. The Owner will give notice of observed defects with reasonable promptness.

19. Daily Clean-Up

Before the completion of each days work, the Contractor shall be responsible for cleaning up and removing or relocating all excavated material, debris, equipment and like and for temporary backfilling or filling excavations as necessary to insure the continuous flow of traffic in roadways where work is progressing including access to private property during non-working hours.

20. Nondiscrimination

Discrimination is prohibited under this contract.

No person in the United States shall, on the ground of race, color, national origin, or sex, be excluded from participation under any program or activity of a recipient government which government receives funds made available under Subtitle A of the Act. Any prohibition against discrimination on the basis of age under the Age Discrimination Act of 1975 (hereinafter referred to as discrimination on the basis of age) or with respect to an otherwise qualified handicapped individual as provided in section 504 of the Rehabilitation Act of 1973, (hereinafter referred to as discrimination on the basis of handicapped status) or any prohibition against discrimination on the basis of religion, as well as any exemption from such prohibition as provided in the Civil Rights Act of 1964 or the Civil Rights Act of 1968 (hereinafter referred to as discrimination on the basis of religion) shall also apply to any such program or activity.

All of subpart E or Regulations governing the Payment of Entitlements under Title I of the State and Local Fiscal Assistance Act of 1972 as Amended by the State and Local Fiscal Assistance Amendments of 1976 applies.

The Town of Groton does not discriminate against individuals with disabilities as provided in the Americans With Disabilities Act (ADA). The Town expects that the vendors and/or contractors with whom it does business will comply with the American With Disabilities Act to the extent required by law. If awarded a contract with the Town, the successful vendor/contractor will be required to sign a statement agreeing to comply with the provisions of ADA.

21. Extra Work

The Contractor shall be responsible for performing any extra work, as requested by the Owner, made necessary by changes in plan or required to fulfill the scope of the project. Such work shall be performed by the Contractor at the unit or lump sum price provided in the Contract.

22. Samples

All samples called for in the Specifications or required by the OWNER shall be furnished by the CONTRACTOR at his expense and shall be submitted to the OWNER for his approval. Samples shall be furnished so as not to delay fabrication, allowing the OWNER reasonable time for the consideration of the samples submitted. CONTRACTOR shall furnish such samples of materials, and workmanship shall be in accordance with approved samples.

23. Quality of Equipment and Materials

- A. Everything furnished and provided shall be new, and all materials and equipment shall be of the quality specified. All unspecified materials and equipment shall be equal in grade and quality to specified materials. The CONTRACTOR shall furnish satisfactory evidence as to the kind and quality of all materials.
- B. In order to establish standards of quality, the OWNER may have, in the detailed Specifications, referred to certain products by name and catalog number. This procedure is not to be construed as eliminating from competition other products of equal or better quality by other manufacturers where fully suitable in design.
- C. The CONTRACTOR shall abide by the OWNER'S judgment when proposed substitute materials or items of equipment are judged to be unacceptable and shall furnish the specified materials or items of equipment in such cases. All proposals for substitutions shall be submitted in writing by the General CONTRACTOR and not by individual trades or material suppliers. The OWNER will approve or disapprove proposed substitutions in writing within a reasonable time. No substitute materials shall be used unless approved in writing.

24. Shop or Setting Drawings

The Contractor shall submit promptly to the Owner two copies of each shop or setting drawing prepared in accordance with the schedule predetermined as aforesaid. After examination of such drawings by the Owner and the return thereof, the Contractor shall make such corrections to the drawings as have been indicated and shall furnish the Owner with two corrected copies. If requested by the Owner, the Contractor must furnish additional copies. Regardless of corrections made in, or approval given to, such drawings by the Owner, the Contractor will nevertheless be responsible for the accuracy of such drawings and for their conformity to the Plans and Specifications, unless he notifies the Owner in writing of any deviations at the time he furnishes such drawings.

25. Plans and Specifications at the Site

The Contractor shall maintain at the Work Site, one copy of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders and other modifications, Schedules, Instructions, etc. in good order and marked to record all changes made during construction. These shall be available at all times to the Owner or his authorized representatives.

26. Materials, Services, and Facilities

It is understood that except as otherwise specifically stated in the contract documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature, and all

other services and facilities of every nature whatsoever necessary to execute, complete, and deliver the work within the specified time.

27. Contractor's Title to Materials

No materials or supplies for the work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him in the work, free from all liens, claims or encumbrances.

28. Inspection of Construction

- A. Definition. "Work" includes, but is not limited to materials, workmanship, and manufacture and fabrication of components.
- B. The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the work called for by this contract conforms to contract requirements. The Contractor shall maintain complete inspection records and make them available to the Town. All work is subject to inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the contract.
- C. Town inspections and tests are for the sole benefit of the Town and do not:
 - 1. Relieve the Contractor of responsibility for providing adequate quality control measures;
 - 2. Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;
 - 3. Constitute or imply acceptance;
- D. The presence or absence of a Town inspector does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the specification without the Owner's written authorization.

29. Inspection and Testing of Materials

- A. All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be selected by the Owner. The Owner will pay for all laboratory inspection service direct, and not as a part of the Contract.

- B. Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for uses intended.

30. Contractor's Obligations

The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise specified, necessary or proper.

31. Weather Conditions

In the event of temporary suspension of work, or during the inclement weather, or whenever the Owner shall direct, the Contractor will, and will cause his Subcontractors to protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Owner, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his Subcontractors so to protect his work, such materials shall be removed and replaced at the expense of the Contractor.

32. Provisions Required By Law Deemed Inserted

Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if, through mistake or otherwise, any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion or correction.

33. Right of the Owner to Terminate Contract

In the event that any of the provisions of this contract are violated by the Contractor, or by any of his subcontractors, the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate the Contract, such notices to contain the reasons for such intention to terminate the contract, and unless within (10) days after the serving of such notice upon the Contractor, such violation or delay shall cease and satisfactory arrangement of correction to be made, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the Owner shall immediately serve notice thereof upon the Surety and the Contractor and the Surety shall have the right to take over and perform the contract; provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the Owner may take over the work and prosecute the same to completion by contract or by force account for the account and at the expense of the Contractor and the Contractor and his Surety shall be liable to the Owner for any excess cost occasioned the Owner thereby; and in such event the Owner may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefore.

In the event of such termination, the OWNER may take possession of the work and of all materials, tools and equipment thereon and may finish the work by whatever method and means he may select. The CONTRACTOR shall consider it default whenever he shall:

- A. Declare bankruptcy, become insolvent, or assign his assets for the benefit of his creditors.
- B. Disregard or violate important provisions of the Contract Documents or OWNER'S instructions, or fail to prosecute the work according to the agreed Schedule of Completion including extensions thereof.
- C. Fail to provide a qualified superintendent, competent workmen or SUBCONTRACTORS, or proper materials, or fail to make prompt payment thereof.

If the right of the CONTRACTOR to proceed is so terminated, the OWNER may take possession of and utilize in completing the work such materials, appliances, supplies, plant and equipment as may be on the site of the work, and necessary therefor. Upon termination of the CONTRACT by the OWNER, no further payments shall be due the CONTRACTOR until the work is completed. If the unpaid balance of the Contract Amount shall exceed the cost of completing the work including all overhead costs and damages resulting from delay, the excess shall be paid to the CONTRACTOR.

If the cost of completing the work shall exceed the unpaid balance, the CONTRACTOR and his sureties shall pay the difference to the OWNER.

34. Acceptance of Final Payment Constitutes Release

The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor for all things done or furnished in connection with his work and for every act and neglect of the Owner and others relating to or arising out of this work. No payment, however, final or otherwise, shall operate to release the Contractor or his sureties from any obligations under this contract or the Performance and Payment Bond.

35. Assignments

The Contractor shall not assign the whole or any part of this contract or any moneys due or to become due hereunder without written consent of the Owner. In case the Contractor, with the consent of the Owner, assigns all or any part of any moneys due or to become due under this contract, the instrument of assignment shall contain a clause substantial to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the Contractor shall be subject to prior claims of all persons, firms and corporations of services rendered or materials supplied for the performance of the work called for in this contract.

36. Codes, Regulations and Issue Date of Standard Specifications

Where standard specifications, codes, regulations and similar publications of governmental agencies, technical societies, manufacturer's associations and regulatory groups or bureaus are referred to in these Specifications, the applicable portion thereof shall be of the same effect as if fully printed herein, and the work done in full accordance therewith. The edition current as of the date of issue of this Specification shall be used except where publication date is specifically stated.

37. Emergency Telephone Number

The CONTRACTOR is required to provide the OWNER with a telephone number, which can be used during emergencies, 24 hours per day, seven days per week, to reach the CONTRACTOR.

38. Other Contracts

The Town may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with Town employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Owner. The Contractor shall not commit or permit any action that will interfere with the performance of work by any other contractor or by Town employees.

39. The Owner's Duties and Rights

- A. The OWNER will provide the lands shown on the Drawings upon which the work under the CONTRACT is to be performed and to be used for rights-of-way for access. Any delay in furnishing these lands by the OWNER shall be deemed proper cause for adjustment in the Contract Amount and in time of completion.
- B. The OWNER shall have the right to suspend the work or any portion thereof at any time provided that he gives the CONTRACTOR five (5) days written notice of suspension which shall set forth the date on which work is to be resumed. The CONTRACTOR shall resume the work upon written notice from the OWNER and within ten (10) days after the date set forth in the notice of suspension. If the OWNER does not give written notice to resume work within ten (10) days of the date fixed in the notice of suspension, the CONTRACTOR may abandon that portion of the work so suspended and shall be entitled to payment for all work done on the portions so abandoned, plus 15 percent of the value of the abandoned work to compensate for overhead, plant expense, and anticipated profit.
- C. The OWNER shall have the authority to suspend the work, wholly or in part, for such period or periods, as may be deemed necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for prosecution of the work, or failure on the part of the CONTRACTOR to carry out the provisions of the CONTRACT or to supply materials meeting the requirements of the

Specifications. The CONTRACTOR shall not suspend operations due to unsuitable weather without the OWNER'S permission.

- D. The OWNER shall have the right to correct any deficiencies, without prejudice to any other remedy he may have, upon failure of the CONTRACTOR to perform the work in accordance with the Contract Documents, including any requirements with respect to the Schedule of Completion, after five (5) days written notice to the CONTRACTOR. The cost of the work so performed by the OWNER shall be paid for by the CONTRACTOR.
- E. The OWNER shall have the authority to direct the CONTRACTOR not to correct work that has been damaged, or that was not performed in accordance with the Contract Documents. An equitable deduction from the Contract Amount shall be made to compensate the OWNER for the uncorrected work.
- F. The OWNER shall have the right to order changes in the work through additions, deletions or modifications without invalidating the CONTRACT.
- G. The OWNER shall have the right to take possession of and use any completed or partially completed portions of the work, notwithstanding that the time for completing the entire work or such portions may not have expired; but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the Contract Documents. If such prior use increases the cost of or delays the completion of uncompleted work or causes refinishing of completed work, the CONTRACTOR shall be entitled to such extra compensation, or extension of time or both, as the OWNER may determine.

40. Wage Rates

Notice is given that Section 31-53 of the State Statutes, as amended, **may apply** to this Contract. The provisions of this section **shall not apply** where the total cost of all work to be performed by contractors and subcontractors in connection with new construction of any public works project is less than four hundred thousand dollars (\$400,000.00) or where the total cost of all work to be performed by contractors and subcontractors in connection with any remodeling, refinishing, refurbishing, rehabilitation, alteration or Repair of any public works project is less than one hundred thousand dollars (\$100,000.00). Upon the award of any contract subject to the provisions of this act, the contractor to whom such contract is awarded shall certify, under oath, to the Labor Commissioner the pay scale to be used by such contractor and any of his subcontractors for work to be performed under such contract.

There shall be paid each laborer or mechanic of the Contractor or Subcontractor engaged in work on the project under this Contract in the trade or occupation listed at the end of this section, not less than the hourly wage rate set opposite the same, regardless of any contractual relationship which may be alleged to exist between the Contractor or any Subcontractors and such laborers and mechanics.

The wage rates have been determined by the State Labor Department and the contractor in payment of wage shall be bound by such schedules in the performance of the work herein provided.

In accordance with Public Act 93-392, the Contractor shall submit weekly to the Town a certified payroll (Forms ROW-CP1 and CP2) accompanied by a Statement of Compliance. Samples of these forms are included with the wage rates.

In accordance with Public Act 02-69, the contractor shall contact the Labor Commissioner on or before July first of each year for the duration of this contract, to ascertain the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of each mechanic, laborer or worker employed upon the work contracted to be done, and shall make any necessary adjustments to such prevailing rate of wages and such payment or contributions paid or payable on behalf of each such employee, effective each July first.

The annual adjustments will be posted on Department of Labor Web page: www.ctdol.state.ct.us. For those without internet access, please contact the Department of Labor.

41. Contract Bid Breakdown (Lump Sum)

The Contractor shall furnish a breakdown of each lump sum bid within 10 days after date of award of contract. Partial payments will be based on this breakdown. The Contractor's breakdown will be reviewed by the OWNER to insure that costs are proportioned properly between early and late pay items. Any unbalanced items or other discrepancies will be revised by the OWNER and the approved breakdown will be utilized as a basis for progress payment to the Contractor.

42. Work Hours, Access and Passes

- A. Regular work hours are 7:30 am to 4:00pm, Monday - Friday. Any work necessary to be performed after regular working hours, on Sundays or Legal Holidays, shall be coordinated with the Submarine Force Library and Museum Officer In Charge (Museum OIC).
- B. The Contractor shall coordinate with Museum OIC on all access and use matters, including access to the site, parking, equipment and material lay down areas, work from the water and from the Nautilus pier, and securing the work area during non-work hours.
- C. Contractor vehicles: All vehicles shall display a valid state license plate, be insured, and shall be maintained in good repair.
- D. The Contractor shall provide the Town and Museum OIC the name(s) of the supervisory person(s) authorized to act for the contractor. Provide, and update as required, a list of the key personnel for the Contractor and subcontractors including addresses and telephone numbers for use in the event of an emergency.
- E. The Contractor shall comply with the instructions provided by the Museum OIC or his crew in the event of an emergency.

- F. Contractor employees shall conduct themselves in a proper, efficient, courteous and businesslike manner. Remove from the site any individual whose continued employment is deemed by the Museum OIC to be contrary to the public interest or inconsistent with the best interests of National Security.

43. Waste Disposal

The Contractor shall be responsible for the cost and legal disposal of all construction debris, municipal solid waste, stumps, and excess materials.

The Contractor shall legally dispose of any hazardous materials at approved sites at his own expense.

END OF SECTION

SUPPLEMENTARY CONDITIONS

1. Insurance Requirements
2. Worker's Compensation Provision
3. Indemnification
4. Enumeration of Contract Drawings, Specifications, Appendices and Addenda
5. Lock-Out Tag-Out Standard
6. Hazard Communication

Insurance Requirements- Marine Contractor

Contractor shall agree to maintain in force at all times during the contract the following minimum coverages and shall name Town of Groton as an Additional Insured on a primary and non-contributory basis to all policies, except Workers Compensation. All policies should also include a Waiver of Subrogation.

Insurance shall be written with Carriers approved in the State of Connecticut and with a minimum AM Best's Rating of "A-" VIII. In addition, all Carriers are subject to approval by Town of Groton.

		(Minimum Limits)
General Liability	Each Occurrence	\$1,000,000
	General Aggregate	\$2,000,000
	Products/Completed Operations Aggregate	\$2,000,000
Auto Liability	Each Occurrence	\$1,000,000
Professional Liability	Each Occurrence/Aggregate	\$1,000,000
Protection and Indemnity	Each Occurrence/Aggregate	\$1,000,000
Umbrella/Bumbershoot	Each Occurrence/Aggregate	\$1,000,000

If any policy is written on a "Claims Made" basis, the policy must be continually renewed for a minimum of two (2) years from the completion date of this contract. If the policy is replaced and/or the retroactive date is changed, then the expiring policy must be endorsed to extend the reporting period for claims for the policy in effect during the contract for two (2) years from the completion date.

Workers' Compensation and Employers' Liability	WC Statutory Limits	
	EL Each Accident	\$1,000,000
	EL Disease Each Employee	\$1,000,000
	EL Disease Policy Limit	\$1,000,000

Original, completed Certificates of Insurance must be presented to Town of Groton prior to contract issuance. Contractor agrees to provide replacement/renewal certificates at least 30 days prior to the expiration date of the policies. Should any of the above described policies be cancelled, limits reduced or coverage altered, 30 days written notice must be given to the Town.

2. Worker's Compensation Provision

Before entering into the contract for the project, the successful bidder must comply with all aspects of State Statute 31-286a, including providing the Town with a current statement from the State Treasurer that, to the best of his knowledge and belief as of the date of the statement, the Contractor or any of his Subcontractors was not liable to the State for any Worker's Compensation payments made pursuant to Section 31-355 of the General Statutes.

Contract documents will not be signed until the statement has been received by the Town from the State Treasurer.

3. Indemnification

The Contractor will indemnify and hold harmless the Owner (Town of Groton) and the Engineer and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the work, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom. The Contractor, subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable will be held responsible for any type of pollution and/or environmental impairment into or upon land, the atmosphere or any course or body of water that is above or below ground; and is caused in whole or in part by any negligent or willful or wanton act or omission of any of the above stated individuals or group of individuals. The Contractor, Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable will be held responsible for acts that are outside of the contract specifications and without the supervision or direction of the Town, its architects, and engineers. These same individuals or group of individuals will also be held responsible for the misuse or malfunction of any equipment rented, owned or leased by any of these individuals or groups of individuals that would create any type of pollution or environmental damage.

The owner assumes no responsibility or liability arising from loss or damage to Contractor's equipment, materials or supplies.

4. Enumeration of Contract Drawing, Specifications, Appendices and Addenda

The following are the contract drawings, specifications, appendices and addenda which form a part of this contract as set forth in paragraph 5 of the General Conditions.

Specifications

Specifications and Bid Form for "Nautilus Pier Water Taxi Dock"
Information for Bidders
Bid Proposal
General Conditions
Supplementary Conditions

Technical Specifications

Addenda

Number and Date

Plans

“Nautilus Pier Water Taxi Dock” Public Works Department, Town of Groton, Attachments 1-11.”

5. Lock-Out Tag-Out Standard

The Town of Groton requires that any Contractor that maintains or is hired to work on any Town equipment, abide by the OSHA "Lock-Out Tag-Out" standard. The Contractor must provide his workers with locks, hasps and keys approved by OSHA for the proper locking and tagging out of equipment from its power source according to the OSHA standard. The Town of Groton is not responsible for providing the Contractor with the locks and hasps. The Contractor is responsible for complying with this standard and assuring that all of his employees comply with it while working on Town of Groton equipment. The Town requires that any Contractor's equipment brought on to Town property by the Contractor be properly locked or tagged out from its power source in accordance with the OSHA standard.

6. Hazard Communication

The Town of Groton requires that any vendor or Contractor using hazardous materials, or any material that would fall under the OSHA "Right to Know" standard, provide a list to the Town of Groton of those materials that will be used while on Town property, as well as the material safety data sheets for those products. Conversely, the Town of Groton shall inform the Contractor of where the "Employee Right to Know" station is in the area where they are working so that the Contractor's employees can be aware of any substances that they may encounter while working within the Town of Groton workplace.

TECHNICAL SPECIFICATIONS

NUMBER

TITLE

PART 1

NOT USED

PART 2

NOT USED

PART 3

STATEMENT OF WORK/PROJECT PROGRAM

PART 4

MINIMUM MATERIALS, ENGINEERING AND CONSTRUCTION REQUIREMENTS

PART 5

NOT USED

PART 6

ATTACHMENTS

1. 40UB MK 6 Spec 40ft Utility Boat
2. 40UB86xx Outboard Profile & Arr_5104246
3. 2381-GangwayTransitionPlate
4. B571-Nautilus Deck and Framing Plan
5. B571-Nautilus Mooring General Sections
6. B571-Nautilus Sections and Details
7. Entry Gate Example
8. Historical data Soil Borings-7-29-1983
9. Part 6-NautilusSubMuseumTaxi_020819 OL1_REV2
10. Pedestrian Brow Details
11. Typical Power Pedestal Installation

Note: Referenced Unified Facilities Criteria (UFC) can be found at the following link; <https://www.wbdg.org/ffc/dod/unified-facilities-criteria-ufc>

PART 1 NOT USED

PART 2 NOT USED

PART 3 STATEMENT OF WORK / PROJECT PROGRAM

TABLE OF CONTENTS:

CHAPTERS

1. PROJECT DESCRIPTION
2. PROJECT OBJECTIVES
3. SITE ANALYSIS
4. BUILDING REQUIREMENTS - Not Used
5. ROOM REQUIREMENTS - Not Used
6. ENGINEERING SYSTEMS REQUIREMENTS (ESR)
 - A10 Foundations: Not Used
 - A20 Basement Construction: Not Used
 - B10 Superstructure: Not Used
 - B20 Exterior Closure: Not Used
 - B30 Roofing: Not Used
 - C10 Interior Construction: Not Used
 - C20 Stairs: Not Used
 - C30 Interior Finishes: Not Used
 - D10 Conveying Systems: Not Used
 - D20 Plumbing: Not Used
 - D30 HVAC: Not Used
 - D40 Fire Protection Systems: Not Used
 - D50 Electrical Power and Lighting: Not Used
 - E10 Equipment: Not Used
 - E20 Furnishings: Not Used
 - F10 Special Construction: Not Used
 - F20 Selective Building Demolition: Not Used
 - G10 Site Preparations:
 - G20 Site Improvements:
 - G30 Site Mechanical Utilities: Not Used
 - G40 Site Electrical Utilities: Not Used
 - H10 Waterfront Structures
 - H20 Graving Docks: Not Used
 - H30 Coastal Protection: Not Used
 - H40 Navigational Dredging and Reclamation: Not Used
 - H50 Waterfront Utilities

1.0 PROJECT DESCRIPTION:

The contractor shall design, provide, and install a floating pier with an attached landing platform and an accessible gangway that connects existing fixed pier that services the Historic Ship NAUTILUS (SSN 571) to a new floating pier. The floating pier shall be anchored with a minimum of four (4) cantilever steel pipe piles. The new floating pier and gangway shall have electrical lighting, handrails, and 6ft swing gates at the top of the gangway.

2.0 PROJECT OBJECTIVES:

The Small Harbor Improvement Project Program of the State of Connecticut Port Authority (CTPA) has funds to design and build a floating dock connected to the existing HS Nautilus Pier with access to the Nautilus Submarine and museum. The Town requested the floating pier to accommodate water taxi services provided by the Thames River Heritage Park Foundation (TRHP) anchor site via water taxi. The floating pier will provide a safe landing spot for the water taxi to tie up with a pedestrian brow that will provide access to the Nautilus Pier.

2.1 APPLICABLE CODES AND STANDARDS - Not Used

2.2 SUSTAINABLE DESIGN: N/A

3.0 SITE ANALYSIS

3.1 EXISTING SITE CONDITIONS

The site is just south of the Nautilus Submarine Pier which is located on the Thames River south of the Naval Submarine Base Groton CT. Existing utilities include electric.

Geotechnical Data: The requirements to subsurface investigation are described in ESR Section H1010 Substructure of this contract.

3.2 SITE DEVELOPMENT

This project will require access to the Nautilus Pier which will be coordinated with the Museum OIC and the Town.

3.3 PERMITTING AND AGENCY REVIEW

SUBASE Environmental Office will provide all the permits to install Floating Taxi Pier. The Town shall coordinate these permits with contractor installing the floating pier.

4.0 BUILDING REQUIREMENTS: Not Used

5.0 ROOM REQUIREMENTS: Not Used

6.0 ENGINEERING SYSTEMS REQUIREMENTS (ESR)

G10 SITE PREPARATION

Physically verify the location of all existing utilities.

G20 SITE IMPROVEMENTS

G2040 SITE DEVELOPMENT

Protect the construction site using an 8-foot (2.43 meter) high chain link security fence during construction on the Nautilus Pier.

H10 WATERFRONT STRUCTURES

SYSTEM DESCRIPTION

Floating Water Taxi Dock system consists of the following:

Floating pier structure. The floating pier shall be 70' long x 16' wide, shall include Low Voltage LED lighting fixtures, handrails, and shall include mooring hardware for the safe mooring of two (2) design vessels as identified in the contract. The floating pier structure shall include a landing platform for supporting an accessible gangway.

Accessible gangway. The gangway shall be approx. 80ft long by 6ft wide, shall be handicap accessible with LED low voltage safe lights, handrails, and with gate at top of ramp. The gangway shall connect to an 8ft by 8ft platform located at south east end of the existing fixed pier that services the Historic Ship NAUTILUS (SSN 571) to the floating pier structure.

The purpose of the Floating Water Taxi Dock system is to provide a berth for one water taxi and safe access of the general public from the floating pier to the fixed NAUTILUS pier. The floating dock shall be capable to also support a second small Navy owned service craft on the northern west side of the pier. There shall be a lockable 4ft wide swing gate and two cleats to support this boat. The overall layout, dimensions of new structure and the required appurtenances are on the contract drawings provided in Part 6. For additional information, refer to the requirements of PTS Section H10 of Part 4.

GENERAL SYSTEM REQUIREMENTS

Provide a Floating Water Taxi Dock system complete in place, tested and approved, as specified throughout this contract. Provide material and equipment as needed for a complete, usable structure. Provide proper installation in accordance with the criteria of this ESR Section H10, UFC 4-152-07, and the manufacturer's recommendations. Where the word "should" is used in the manufacturer's recommendations, substitute the word "must".

The service life of waterfront structures must be 25 years.

Do not commence in-water and over-water waterfront structure work until the required permits are granted by SUBASE EV Dept. Site Analysis of Part 3 are obtained. Work to be done below Mean Higher High Water (MHHW) is considered in-water work.

Design Vessels

The design vessel is listed below: 40 foot Utility Boat Mark 6.

VESSELS	DRAFT	LENGTH	BEAM	DISPLACEMENT	
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40 foot Utility Boat Mark 6 Service craft	3'-6"	39'-11"	11'-10"	28,800 Lbs.	
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Mooring Requirements

Design the facilities for Type I Mild Weather Mooring service per requirements of UFC-4-152-01, 4-152-07, UFC-4-159-03, and this contract.

Load Requirements

Design each element of Floating Water Taxi Dock system and their connections. Design loads and load application must be in accordance with UFC 4-152-07 with the following project specific requirements:

GENERAL ENVIRONMENTAL CONDITION Station 8461490, New London, Thames River, CT. Elevations on NAVD88 in feet:

Mean Higher High Water (MHHW) = 1.21

Mean Lower Low Water (MLLW) = -1.84

Water Level Max (ref. MHHW) = 7.53 Ft. Sep 21, 1938

Water Level Min (ref. MLLW) = -4.00 Ft. Feb 02, 1976

WAVE LOAD - Pier and gangway (unoccupied) shall be designed and constructed using Significant Wave Height H_s , Maximum Wave Height H_1 , corresponding wave periods and wave directions which shall be determined by the Contractor for the project site.

The occupied pier and gangway shall be designed for operating pier in "good" wave conditions as defined in table 2.5 of ASCE "Planning and Design Guidelines for Small Craft Harbors".

CURRENT LOAD - to be determined by the Contractor for the project site.

Current Loads shall be calculated on the basis of maximum currents, flood flows, tidal flows and/or other site-specific moving water loadings.

WIND LOAD - to be determined by the Contractor for the project site.

Base wind design on Exposure D and basic wind speed of 135 mph.

SNOW AND ICE LOAD

30 psf ground snow load. Ice thickness = 4 inches. Ice load to be determined by the Contractor per AASHTO guidance.

FLOATING DEBRIS

Drag load produced by a debris mat of 3 ft thick.

IMPORTANCE FACTORS

The structure classification for determining Importance Factors for seismic, snow, and wind design must be for Occupancy Category II in accordance with Table 2-2 of UFC 3-301-01.

BERTHING LOAD - to be determined by the Contractor for operating pier in “good” wave conditions defined in table 2.5 of ASCE “Planning and Design Guidelines for Small Craft Harbors”. Approach velocity of the design vessel shall be 1 ft. /sec minimum.

DEAD LOAD (DL) - Weight of the permanent structural components

LIVE LOAD ON PIER: Uniform Load (ULL) - 25 psf for pier with restricted access or a concentrated Live Point Load (LPL) applied at any point on the pier not closer than 12” from any edge (LPL) - 400 lbs

LIVE LOAD ON GANGWAY: Uniform Live Load 100 psf for gangway;
Uniform Live Load 50 psf for live load transferred to floating pier;

LIVE LOAD ON HANDRAIL: 50 lbs per linear foot applied horizontally along centerline of top rail 200 lbs applied vertically at any point along length of any horizontal element of handrail.

SEISMIC LOAD CRITERIA:

Risk Classification - High

Seismic Performance Level - Level 2

Probability of Exceedance - 10% In 50 Years

Return Period - 475 Years

Site Classification - F

Response Modification Factor (R) = 3

Required Dimensional and Other Constraints

Under Dead Load only the pier shall have a minimum freeboard of 16” and a maximum freeboard of 24”.

Under full Live load and Dead Load the pier shall have a minimum freeboard of 10”.

MAXIMUM SLOPES ON PIER DECK:

Under DL only, and (DL+ULL) - Maximum cross slope 1/4” per ft, not to exceed 1 inch.
Maximum Longitudinal Slope 1/8” per ft, not to exceed 1 inch in 10 feet.

Under (DL+LPL) – Maximum cross slope 1/2” per ft, not to exceed 2 inches maximum.
Maximum Longitudinal Slope 1/4” per ft, not to exceed 2 inch in 10 feet.

MAXIMUM DEFLECTIONS AND SLOPES ON GANGWAY:

Maximum cross slope shall not exceed 1/4" per foot.

Maximum Longitudinal Slope shall not exceed 1:12 (8%).

Maximum vertical deflection under dead load and live load shall not exceed L/360.

Maximum horizontal deflection shall not exceed L/300.

H1010 SUBSTRUCTURE

The floating pier shall be anchored against lateral forces with cantilever anchor steel piles. Design and construct cantilever anchor piles such that the structure meets all gravity, soil, static, seismic, wind, mooring, and berthing loadings specified in this ESR Section H10, and performance requirements of Paragraph H1010 in PTS Section H10 of Part 4. Provide piles high enough to prevent pier floating off the top.

Material and construction type selections for substructure elements are as follows. These requirements have precedence over specifications provided in Part 4:

The anchor piles shall be steel pipe piles. Provide pile caps.

All steel shall be epoxy coated or hot-dip galvanized.

Steel piles shall be coated or galvanized prior to driving. Provide provisions to dampen the noise produced by steel piles during wind events.

Pile guides shall be faced with Ultra High Molecular Weight polyethylene rub blocks.

A Soil Sampling and Laboratory Testing report is not available. A historical data from construction of Nautilus Memorial Submarine Force Library and Museum dated 7-29-1983 is attached in Part 6 of this contract. It is the responsibility of the Contractor to evaluate and assess the project impact of the soil sampling and laboratory testing report data, perform a detailed and complete geotechnical engineering investigation, and design of pile embedment for the final project design and construction.

H1020 SUPERSTRUCTURE

Superstructure for the new floating pier shall consist of floating pontoons. Floating pontoons shall consist of a foam core encapsulated in a protective shell to prevent contact with water. The foam shall completely fill the shell and have maximum water absorption of less than 3% per ASTM C272. Protective shell shall be made of composite materials or precast concrete. Concrete mix shall be designed for the marine exposure and shall provide sufficient cover for the reinforcement. All reinforcing steel shall be epoxy coated or hot-dip galvanized.

Access to floating pier shall be via gangway. Gangway construction shall be of aluminum.

The upper end of the gangway shall be supported on new 8ft by 8ft platform and include hinge and rollers to allow for water fluctuation. All structural steel and hardware shall be hot-dip galvanized. All field connections shall be bolted connections. Removal of existing

concrete, new construction and attachments to the existing pier shall be performed with no detrimental effect on operation and performance of the existing pier.

The lower end of the gangway shall bear on the floating landing platform and include rollers. Provide transition plates. Floating landing platform shall be integral part of the floating pier and shall comply with the requirements to floating pier in this ESR Section H10.

H1030 DECK

Deck on pier shall be either composite or concrete. Deck surface on pier and gangway must be resistant to staining, and must be non-skid to provide traction especially when wet. Deck must be held in place using 4 steel pipe pile.

H1040 MOORING AND BERTHING SYSTEM

Provide 5 equally spaced cleats along the berthing side of the pier. Cleats shall be 14"-16" size. Cleat anchorage to the pier shall be designed for the nominal cleat capacity obtained from cleat manufacturer. Cleats shall be located along the edge of the pier to minimize tripping hazard. The recommended mooring configurations are shown on the contract drawings provided in Part 6.

Fendering system shall include bumpers with continuous vinyl bumper strip.

Prepare mooring analysis based on guidance provided in UFC 4-159-03 and UFC 4-152-07 to determine the required capacity of mooring hardware and to determine fendering requirements for this project.

Material selections for mooring and berthing elements are as follows. These requirements have precedence over specifications provided in Part 4:

Cleats shall be SS316.

Bumpers shall be a continuous rub rail running for a full length of the berthing edge of pier.

Continuous vinyl bumper strip attached to the top edge of the rub rail to reduce marring of the vessel hull and to provide cushioning.

H1050 APPURTENANCES

Design and construct the following appurtenances for the floating pier and accessible gangway:

Provide a permanent perimeter handrail around three sides of the pier, on landing platform, and on accessible gangway. Handrail shall 42" height and shall satisfy OSHA requirements.

Provide an 8 feet wide gate to the gangway with a lock at the top end of the gangway. Contractor to install on stainless steel approved lockable security swing gate with side protection for pedestrian access from the pier to the top platform.

Provide a Life Ring.

Provide a Fire Extinguisher (CO2 & PKP).

H1060 OTHER FEATURES

Provide adequate electrical power and lighting on floating pier and on accessible gangway as described in ESR Section H50, Waterfront Utilities.

Provide warning and guidance signs as needed.

Part of the existing security buoy line from existing white security buoy to the bank shall be removed and replaced with new buoy line placed to accommodate the floating pier.

Provide striping on pier as needed.

H50 WATERFRONT UTILITIES

SYSTEM DESCRIPTION

The Waterfront Utility System shall provide electrical power from existing Watch Station Building to the new Floating Water Taxi Dock system. The Waterfront Utility System shall include safety lighting on floating pier and accessible gangway, lightning protection, grounding, and all accessories and devices as necessary and required for a complete and usable system.

GENERAL SYSTEM REQUIREMENTS

Provide a Waterfront Utilities System complete in place, tested and approved, as specified throughout this contract, as needed for a complete, usable and proper installation. Install all material in accordance with this ESR and PTS Section H50. Where the word "should" is used in the manufacturer's recommendations, substitute the word "must".

H5010 CIVIL/MECHANICAL UTILITIES - Not used

H5020 ELECTRICAL UTILITIES

Design and construct the electrical power distribution system to comply with UFC 4-150-02, *Dockside Utilities for Ship Service*, UFC 3-530-01 for lighting design, NFPA 70 and the requirements of the "Electrical Power Distribution System" paragraph in PTS Section H50 of Part 4.

H502001 ELECTRICAL POWER DISTRIBUTION - Not used

H502002 TELECOMMUNICATION - Not used

H502003 LIGHTING

Provide new PVC conduits, enclosures, and low level four (4) LED light pedestals for lighting of floating pier. Provide safety lighting on accessible gangway. All mounting hardware and enclosures shall be stainless steel SS316.

Desirable locations of the low-level lights are shown on the contract drawings provided in Part 6.

All lighting fixtures shall be designed for waterfront application and shall have an aesthetically pleasing appearance.

Electrical conduits located in the pontoons shall be placed with 6" clearance above the water surface under Dead Load only, and not less than 2" clearance above the water surface under Dead load and Live loads.

Utility connections: Provide a flexible link between a fixed pier side and gangway, and between float and gangway. Provide provisions to prevent conduit damage where it passes through joints between movable members of the system.

Provide PVC coated rigid galvanized steel conduits with hot-dip galvanized mounting hardware for conduit run supported on existing pier.

PART 4 MINIMUM MATERIALS, ENGINEERING AND CONSTRUCTION REQUIREMENTS

1.0 GENERAL REQUIREMENTS

The requirements indicated here are minimum performance requirements. More specific project functional and performance requirements, scope items and expected quality levels over and above the standards in Part 4 are identified in Part 3 of the Request for Proposal .

The Contractor is encouraged to exceed the minimum requirements. The Contractor's performance evaluation will be based in part on enhancements to materials, engineering, design and construction provided for the contract that exceed minimum requirements.

Part 4 is a general section. Not all items in Part 4 will be required for this project. See Part 3 for project-specific requirements. See "Order of Precedence" paragraph in Part 2 for relationships between all parts of the contract.

In general, unless otherwise indicated, Contractor shall provide all labor, equipment and materials necessary to complete the work required for the contract. All work shall be in conformance with all applicable referenced criteria, construction standards, laws and regulations, including applicable building and fire, life safety codes.

1.1 MATERIALS AND METHODS OF CONSTRUCTION

Only new materials and equipment shall be installed in the work. All materials, equipment and appliances shall be of the current manufacturers' products. No obsolete or discontinued materials, equipment and appliances shall be used.

1.2 APPLICABLE CODES AND STANDARDS

The design and construction shall be in accordance with established construction practices, and the latest revision/edition of the following referenced codes and standards. The term "Latest Revision/Edition" is defined as the version as of the project award date. References are available at www.wbdg.org/ndbm/. The advisory provisions of all codes and standards shall be mandatory, as though the word "shall" had been substituted for "should" wherever it appears. Reference to the "authority having jurisdiction" shall be construed to mean "Town". Comply with the required and advisory portions of the current edition of the standard at the time of contract award. All work to comply with UFC 1-200-01, *General Building Requirements*, and IBC 2015 or later edition as modified by applicable NFPA Standard as well as codes and standards listed in contract Part 2 Attachment A.

1.3 LOCATION-SPECIFIC CODES AND STANDARDS

See Part 3.

1.4 DISCREPANCIES

When discrepancies in the referenced standards and the contract requirements occur, the more stringent requirements shall govern. The word "should" in all NFPA publications shall be interpreted as a requirement. The Authority Having Jurisdiction in the interpretation of the codes and standards, and approving the exceptions allowed in the referenced standards, shall be the Town, and the parties designated by the Town.

2.0 PERFORMANCE TECHNICAL SPECIFICATIONS

Note: The paragraph numbers used correspond with the numbers used in UNIFORMAT II/Work Breakdown Structures (WBS) as listed in the Whole Building Design Guide, Navy Design Build Master, accessible at this website: www.wbdg.org/ndbm.

SECTION A. SUBSTRUCTURE

A10 Piles:

Piles shall be designed and placed to suit site conditions. For the purposes of interpreting IBC Chapter 18, the "Owner" and "Building Official" shall mean the "Town", and the "Applicant" shall mean the "Contractor/Designer of Record".

1. **Contractor- Designer:** The Designer of Record shall evaluate the contract data, and obtain and evaluate all additional data as required to support the design and construction.
2. **Geotechnical Site Data required in Design Drawings:** The Contractor's final design drawings shall include:
 - a. Notes identifying the soil allowable bearing capacity used in design.
 - b. Subsurface soil information, Government provided, that represents

subsurface conditions existing on the project site (such as boring logs).
The locations of all borings shall be indicated on the drawings.

3. **Performance Verification and Acceptance Testing:** Verification of satisfactory construction and system performance shall be via Performance Verification Testing, as detailed in this part of the CONTRACT.

SECTION B. SHELL/ FLOAT/ DOCK

Submittal shall be approved by the Town prior to manufacturing the dock

B10 SUPERSTRUCTURES

Superstructure work includes structural frames. Unless otherwise specified in Part 3, superstructures may be designed and constructed using materials or combination of different materials allowed by applicable codes and standards. Special inspection, testing, approvals, certifications, observations and quality assurance plans as prescribed in Chapter 36 Docks Pier Bulkheads and Waterway Structures.

1. **Concrete:**

All concrete shall be designed for saltwater marine conditions for the South Eastern Connecticut weather.

The float manufacturer shall have a minimum of ten (10) years' experience in the design and manufacturing of concrete floats for use in areas susceptible to freeze-thaw conditions.

Float modules shall be cast monolithically in a single pour. There shall be no cold joints of any type.

Float modules shall have a minimum deck thickness of 2 (two) inches and a minimum side wall, end wall and bottom thickness of 1.25 (one and one quarter) inches.

Prior to the manufacturing of any flotation units, the concrete mix design shall be approved by the Owner.

Concrete shall have a minimum twenty-eight (28) day compressive strength of 4000 PSI, per ASTM C-94. Floats made of concrete with less than specified strength may be rejected by the Owner.

The theoretical concrete unit weight shall not be more than 120 pounds per cubic foot.

All concrete testing shall be done under the guidance by certified personnel.

Certification shall be in accordance with the National Ready Mix Concrete Association guidelines or equivalent. All concrete testing methods shall be done in accordance with the respective ASTM specifications.

- 2 **Concrete Reinforcement:**

Galvanized welded wire fabrication used as concrete reinforcement shall be 2" X 2" - 14/14. Welded wire fabric is required in the deck and the bottom sections with a minimum of a two (2) inch return to the sides and ends. Where splicing occurs, the overlap will be a minimum of four (4) inches. Galvanized wire mesh

shall meet ASTM A-185.

Reinforcing steel bars shall be grade 40 or 60, conform to ASTM 615, and shall be epoxy coated in accordance with ASTM A775.

3 Structural Steel:

Structural steel exposed to weathering shall be adequately protected to prevent corrosion from saltwater exposure

4 Expanded Polystyrene Core (EPS):

- a. The closed cell expanded polystyrene core used inside the concrete unit shall conform to ASTM Standard Specification C-578.
- b. The foam shall weigh between .95 and 1.10 pounds per cubic foot.
- c. The EPS will have a water absorption maximum of three (3) percent by volume as tested by ASTM Method C-272.
- d. The foam core shall be held in a true position during the casting operation with an allowable variation of 1/8 inch from the dimensions shown on the shop drawings
- e. Foam billets will have a dimensional tolerance of plus 0.125 inch and minus 0.125 inch.
- f. Foam core may not have more than ten (10) percent reground EPS foam material. Reground foam pieces shall not exceed 3/8 inch in diameter.
- g. Foam core shall be made up of not more than four (4) laminated sections.
- h. The laminated foam core shall be glued with a low solvent glue and shall be strapped to prevent de-lamination during transportation and handling
- i. No horizontal lamination may occur in the upper ten (10) inches of the foam core.

5 Utility Raceways

Each walkway shall have PVC sleeves embedded as required for electrical system with appropriate pull-boxes.

Pull boxes shall be Associated Plastic Type 1730, or approved equal, unless otherwise specified by the owner or required by specific state or local codes.

Pull boxes shall be flush with the walking surface.

Pull boxes shall have a one (1) inch nominal concrete bottom with a smooth or light brushed, slip-resistant finish. Bottom shall not be lower than inverts of the PVC sleeves. All bolts for lids on pull boxes shall be stainless steel.

Both sleeves and piping shall remain above the water surface under dead load conditions and shall be designed to facilitate installation, removal, and servicing of the utilities. Access openings shall be provided at convenient locations if required for special access.

6 Thru-Rod Connections

The minimum dimension for all thru-rods for structural attachment is 3/4 inch thread diameter.

All thru-rods shall be placed within PVC sleeves cast in the float units. The maximum inside diameter of PVC shall not exceed 7/8 inch.

All cast in inserts will be stainless steel, 3/4 inch diameter.

Walers shall be securely fastened to the concrete floats using galvanized thru-rods, plate washers, and heavy hex pin lock nuts.

A minimum of four (4) thru-rods per float unit are required, with a minimum average of one (1) thru-rod per two (2) lineal feet of float length. The quantity and configuration of the thru-rods will be determined by the structural engineer's load calculations on each dock section.

Thru-rods shall be placed through each float unit within six (6) inches of each end of that unit, and within six (6) inches of each lumber splice.

No connecting device shall protrude beyond the fascia into the berth area. Any connecting device protruding above the surface of the deck shall have a low, rounded profile.

All nuts at triangle frame connections shall be re-tightened immediately before receiving utility covers.

7 **Deck Finish**

The float deck surface shall be trowel finished with a steel trowel and a slip-resistant finish applied transversely to the walking surface.

Contractor shall establish finishing methods and procedures to insure an even and consistent broom or screed finish on all deck surfaces. All top edges shall have a 3/8 inch tooled radius with a minimum 1-1/2 inch wide smooth hard steel finished face.

Outside top edges and corners shall be filed smooth. All work shall be performed by persons experienced and skilled in their trade.

8 **Float Weight**

The weight of the complete flotation units shall not vary from the theoretical weight or mean weight of all similar units by more than six (6) percent.

9 **Float Identification**

All floats are to be clearly identified on one side and one end between the bottom of the waler and the waterline with the date of manufacture, specific float type, and job number.

10 **Lumber**

All timber walers and structural lumber shall be of Southern Yellow Pine; "No. 1" or better in accordance with either the Southern Pine Inspection Bureau or the Timber Products Inspection Bureau grading rules.

Lumber shall be fabricated accurately to provide uniform gaps and butt joint connections. Lumber splices shall not exceed 1/2 inch between adjoining ends.

All spacers, plywood, or any other member, which is subject to foot traffic, shall be flush with the concrete walking surface.

11 **Lumber Treatment**

All lumber shall be pressure preservative treated with CCA or ACZA to .6 pound retention.

All lumber, with the exception of laminated beams, will be cut to length and all holes drilled prior to pressure treatment as far as is possible.

Tie bands used for delivery must have plates between the bands and the wood to prevent crushing. Bundle identification shall be done so as not to stain lumber surfaces

12 **Whalers**

All whalers shall be 2" HDMI with countersunk holes for rub whales where boats will be tied up the entire length of the south side of dock and 30ft on the north end of dock at swing gate on northwest end of dock.

All structural steel channels, angles, and plates shall be fabricated from mild steel conforming to ASTM A-36, and shall be hot dipped galvanized after fabrication.

13 **Galvanized Coating**

A hot dipped galvanized coating shall be required on all thru-rods, bolts, miscellaneous hardware, cleats, steel plates, angles, and shapes in accordance with either ASTM A-123 or ASTM A-153 as the process applies to the specific material.

Zinc coating thickness to be a minimum of three (3) mils.

14 **Hardware**

Bolts, nuts, washers, and thru-rods shall be mild steel, in accordance with ASTM A-307, and have a minimum of 1-1/2 inch of thread.

All hardware shall be hot dipped galvanized in accordance with ASTM A-123.

Washers shall be used with all nuts and bolts which bear on wood or steel. Round plate washers shall be used on all thru-rods bearing on wood surfaces. Cut washers shall be used on all surfaces bearing on steel surfaces.

15 **Weldment and Trench Cover Panels**

Cover panels which provide continuous walking surfaces with the concrete deck shall be of high density copolymer resin, specially formulated to provide toughness and durability in a marine environment. The plastic shall contain UV stabilization for optimum performance in direct sunlight and weigh a minimum of .0342 lbs/cubic inch. The material shall be fabricated with a non-slip surface molded in the panels.

B20 EXTERIOR ENCLOSURE: N/A

B30 ROOFING: N/A

SECTION C. INTERIORS: N/A

SECTION D. SERVICES

D10 CONVEYING Elevators and Escalators - Not used

D20 PLUMBING- Not Used

D30 HEATING, VENTILATION AND AIR CONDITIONING (HVAC) SYSTEMS: N/A

D40 FIRE PROTECTION: N/A

D50 ELECTRICAL

D5010 ELECTRICAL SERVICE & DISTRIBUTION

Provide interior electrical wiring, fixtures, switches, outlets, and apparatus in accordance with applicable codes and standards. The electrical system shall conform to NFPA 70. Power and lighting circuits shall be separate.

1. **Wiring:** All wiring shall be in electrical metal conduits and shall be concealed except in the industrial spaces and at locations indicated in Part 3. No conductors shall be smaller than No. 12 AWG, copper wires. Wiring below slab or underground shall be in Schedule 40 PVC with ground wire. Exposed conduits on the exterior of the building are prohibited. Provide a ground conductor for each circuit; conduits shall not be used for grounding. Use of cable assemblies Types AC, MC, or MI and flat conductors are prohibited. Circuit breakers shall be bolt-on type. Series rated circuit breakers and fusible panelboards shall not be used.
2. **Outlet Circuits:** Lighting and convenience outlets shall be on separate circuits. Install GFI protected receptacles at all wet or damp areas. Location of outlets shall be as required by applicable codes and standards. All exterior outlets shall

be on separate circuits, shall be GFI protected, and equipped with a cover to prevent accidental water infiltration into the devices.

D5020 LIGHTING & BRANCH WIRING

1. Lighting Fixtures: All lighting fixtures shall be energy conservation compact LED.
2. Exterior Lighting Fixtures for Ramps and Docks: Exterior lighting fixtures Ramps and Docks shall comply with local regulations regarding low lighting levels to avoid light pollution.
 - a. Photocell Overriding Switch: Provide photocell-overriding switch for all outdoor light fixtures.
3. Provide permanent plaque or directory at each building service and power source identifying all other building services and power sources.
Operator's manuals for each system component shall include detailed instructions on how to operate the system, programming and installation instructions, emergency operating procedures, default program values and set points, listing of field programmed variables and set points, equipment wiring diagrams, product model number, with Name, Address and Telephone number of local representative, and starting, operating, and shut down procedures. Include normal and emergency shutdown procedures, schedule of maintenance work, if any, recommended cleaning agents and methods, replacement parts list, including internal fuses, and warranty information.

SECTION E. EQUIPMENT AND FURNISHINGS

E10 EQUIPMENT

Equipment Ramps and Platforms: Provide equipment to fulfill the work for Part 3. Whenever possible, equipment provided for the facilities in the contract shall be by the same manufacturer and shall be the current model available at the time of proposals.

1. **SCOPE**
GANGWAY AND PLATFORM SYSTEM ALUMINUM FABRICATIONS consists of furnishing transportation, labor, materials, and equipment to design, fabricate and install the aluminum gangways, landing platforms, ramps, and associated appurtenances. All components shall be considered to be part of the "gangway system".
 2. **REFERENCES**
 - A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only. Unless otherwise indicated the most recent edition of the publication, including any revisions, shall be used.
- B. GENERAL DESIGN STANDARDS**
Marina United Facilities Criteria (UFC) 4-157-07 "Design

Small Craft Berthing Facilities”

Safety Division of Occupational Safety and Health (OSHA) –
Various Publications

Steel American Institute of Steel Construction (AISC) "Steel
Construction Manual – 13th Edition"

The Aluminum Association, Inc. (AA) "Aluminum Design Manual”

Accessibility U.S Department of Justice (DOJ) “Building Code
Standards for Accessible Design” (ADA)

C. AMERICAN WELDING SOCIETY (AWS)

AWS D1.2 Structural Welding Code - Aluminum

D. AMERICAN SOCIETY FOR TESTING & MATERIALS (ASTM)

ASTM A276 Stainless Steel Bars and Shapes

ASTM A666 Annealed or Cold-Worked Austenitic Stainless Steel
Sheet, Strip, Plate, and Flat Bar

ASTM B221 Aluminum and Aluminum-Alloy Extruded Bars, Rods,
Wire, Profiles, and Tubes

ASTM B308 Aluminum-Alloy 6061-T6 Standard Structural Profiles

ASTM D4976 Polyethylene Plastics Molding and Extrusion Materials

ASTM F436 Hardened Steel Washers

ASTM F593 Stainless Steel Bolts, Hex Cap Screws, and Studs

ASTM F594 Stainless Steel Nuts

3. DESIGN REQUIREMENTS

A. Information presented in this Section is based upon the best estimate of those environmental and physical factors which reasonably can be expected to affect the design, performance, and durability of the proposed gangway and platform systems. These criteria shall be considered as minimum requirements. Final calculations for the gangway and platform systems, including all structural components of the systems, shall be designed for a minimum fifty-year life expectancy.

B. Final calculations shall demonstrate that the gangways and platform are designed to withstand the required loading without damage throughout the specified design life using the criteria specified in this Section as a minimum standard. The load combinations and allowable stresses are described herein.

C. The project drawings show general layout and configuration of the gangway systems as well as required dimensions. Complete dimensions, which conform to these requirements, specific site conditions, and OSHA Regulations, will be required from the fabricator.

D. ADA-gangways and platform shall conform to the current ADA guidelines for floating dock boating facilities, including length, slope, walking surface, and railing. Non-ADA gangways shall conform to all ADA guidelines except for the slope/length requirement.

E. The vertical design load shall be the combination of the dead weight of the structure and either live load Case A or Case B, whichever governs.

1. Case A shall be a uniform live load of 100 pounds per square foot (psf) of deck surface area to be applied to the gangways.
2. Case B shall be a concentrated live load of 400 pounds applied anywhere on the deck surface.

F. The maximum allowable deflection under the vertical design load shall equal the span divided by 240.

G. The deck and structural components shall be designed with a minimum safety factor on working stress as specified in AA “Aluminum Design Manual” for bridge type structures. For nonaluminum structural components, similar safety factors shall apply.

H. The horizontal design load shall be a uniform wind load of 40 psf of profile area. The horizontal design load shall be applied in combination with the dead weight.

I. Design shall also consider stresses resulting from handling and installation, and provide notations on how to lift, unload and set in place.

J. The gangway systems design shall be coordinated with the float dock systems design. Provide sufficient flotation to support the superimposed load of the gangway plus any appurtenances to maintain required freeboard.

K. The completed gangway and platform systems shall have a manufacturer’s label plate attached in a conspicuous location. This label plate shall be aluminum, brass or stainless steel. The following information shall be stamped or etched into this plate in letters not less than 1/4 inch high filled with black enamel:

1. Manufacturer's Name
2. Date of Manufacture
3. Overall Length
4. Capacity (maximum live load)

L. The walking surface shall be provided with a non-skid surface.

M. The gangway and platform systems shall have a guardrail and handrail on each side of the walking surface (not including the toe plate), designed in accordance with OSHA requirements. The rails shall be fabricated of aluminum pipe or tubing.

N. The gangway systems shall be designed to withstand float motions including a vertical change in elevation due to water level fluctuation as indicated on the project drawings and horizontal drift without structure interference or overstress, including fatigue of gangway members and supports.

O. The gangway toe plate shall make a smooth, gap-free transition between the gangway walking surface on the platform and the float. The toe plate shall be a minimum 1/4 inch material with a non-skid surface and shall be attached to the gangway by means of a continuous pipe hinge. The plate shall be the full width of the gangway and have a maximum slope not exceeding the maximum slope of the gangway.

P. Wheels shall be installed at the float end of the gangway. The wheels shall have an allowable load rating greater than that required by the design loads. The gangway design shall allow the wheels to be supported by the floating dock at all times regardless of float motions.

Q. The gangway hinge shall be supported by either the platform, landing platform connected to the bulkhead, or a pile supported landing platform as indicated on the Contract Drawings. Capacity of the platform to support the landing platform and/or gangway connection shall be confirmed by the Engineer. The hinge shall be designed to permit rotation of the gangway in both the vertical direction and the horizontal direction due to lateral loads on the float and shall accommodate float motions for all environmental conditions.

R. The gangway hinge shall make a smooth, gap-free transition between the gangway walking surface and the landing platform. The hinge cover plate shall be a minimum 1/4 inch material with a non-skid surface and shall be attached to the gangway by means of a continuous pipe hinge. The plate shall be the full width of the gangway.

S. The gangway system shall conform in all respects to design requirements of OSHA rules for marinas and local codes as applicable.

T. The gangway shall be outfitted with low level LED rail lighting in accordance with standard supplied for gangway manufacturer or dock manufacturer.

4. **SUBMITTALS**

The following shall be submitted to the Owner's Engineer for approval:

A. SD-02 Shop Drawings

1. Gangway Systems and Platform

Prior to ordering materials, or starting fabrication of the gangway systems, submit shop drawings signed and sealed by a registered Professional Engineer in Connecticut. The shop drawings shall indicate the proposed gangway system construction and connection details, and methods for

attaching to the existing bulkhead. Submit shop drawings for all fabricated items and catalog sheets for all standard manufactured items that are to be incorporated into the gangway system.

B. SD-05 Design Data

1. Design Computations

Prior to ordering materials or starting fabrication of the gangway systems and platform, submit final design calculations signed and sealed by a registered Professional Engineer in Connecticut. The calculations shall demonstrate that the gangway system, using the criteria specified herein as minimum requirements, is designed to withstand the specified loads without damage throughout the design life of the gangway system.

5. **WARRANTY**

The gangway systems shall carry a manufacturer's written warranty against defects in materials and workmanship with a minimum term of one (1) year from date of project acceptance. The warranty shall clearly state its conditions and any exclusions from coverage.

6. **PRODUCTS:**

1. **MISCELLANEOUS METAL**

A. Stainless steel hardware shall be Type 304 or 316. Bolts shall be ASTM F593, Group 2. Nuts shall be ASTM F594, Group 2. Flat washers shall be cut from Type 304 or 316 stainless steel plate that conforms to the provisions in ASTM A666.

2. **GANGWAY SYSTEM**

A. Aluminum shall be alloy 6061-T6 conforming to ASTM B308, or 6063-T6 conforming to the provisions in ASTM B221. Welding of aluminum shall comply with AWS D1.2.

B. Gangway wheel assembly shall consist of UHMW polyethylene roller, conforming to ASTM D4976. Axle shall be Type 316 stainless steel conforming to the provisions in ASTM A276.

3. **DISSIMILAR MATERIALS**

A. Where dissimilar metals are in contact, or where aluminum is in contact with concrete, masonry, wet or pressure-treated wood, or absorptive materials subject

to wetting, the surfaces shall be protected with a coat of bituminous paint to prevent galvanic action.

7. EXECUTION:

1. WORKMANSHIP

All work shall conform to the approved shop drawings, project drawings and this specification. Construction details, finishing details and colors shall be consistent throughout. Work shall be accurately set to establish lines and elevations, and securely fastened in place. Cutting, drilling and punching shall produce clean true lines and surfaces. Exposed surfaces of work shall have a smooth finish.

2. GANGWAY AND PLATFORM SYSTEM INSTALLATION

- a. Install in accordance with the manufacturer's instructions. Posts and vertical rails shall be plumb, and line rails level.
- b. Contractor shall furnish all materials and equipment required for gangway system installation. The gangway or platform shall not be dragged or skidded into place.
- c. Contractor shall provide, install and remove when no longer required, all temporary supports used to secure the platform or gangway in place during installation.
- d. With the gangway secured in correct position, mark the location of the wheel guides and fasten in place.
- e. Protect installed products until completion of project.

E20 FURNISHINGS: N/A

SECTION F. SPECIAL CONSTRUCTION AND DEMOLITION

F10 SPECIAL CONSTRUCTION: Gangway System Aluminum Fabrications:

1.01 SCOPE

GANGWAY SYSTEM ALUMINUM FABRICATIONS consists of furnishing transportation, labor, materials, and equipment to design, fabricate and install the aluminum gangways, landing platforms, ramps, and associated appurtenances. All components shall be considered to be part of the "gangway system".

1.02 RELATED WORK

A. Floating Dock System – Section 35 51 13

1.03 REFERENCES

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only. Unless otherwise indicated the most recent edition of the publication, including any revisions, shall be used.

B. GENERAL DESIGN STANDARDS

Marina	United Facilities Criteria (UFC) 4-157-07 "Design Small Craft Berthing Facilities"
Safety	Division of Occupational Safety and Health (OSHA) – Various Publications
Steel	American Institute of Steel Construction (AISC) "Steel Construction Manual – 13th Edition"
Aluminum	The Aluminum Association, Inc. (AA) "Aluminum Design Manual"
Accessibility	U.S Department of Justice (DOJ) "Building Code Standards for Accessible Design" (ADA)

C. AMERICAN WELDING SOCIETY (AWS)

AWS D1.2 Structural Welding Code – Aluminum

D. AMERICAN SOCIETY FOR TESTING & MATERIALS (ASTM)

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ASTM B221 Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
ASTM B308 Aluminum-Alloy 6061-T6 Standard Structural Profiles
ASTM D4976 Polyethylene Plastics Molding and Extrusion Materials
ASTM F436 Hardened Steel Washers
ASTM F593 Stainless Steel Bolts, Hex Cap Screws, and Studs
ASTM F594 Stainless Steel Nuts

1.04 DESIGN REQUIREMENTS

- A. Information presented in this Section is based upon the best estimate of those environmental and physical factors which reasonably can be expected to affect the design, performance, and durability of the proposed gangway systems. These criteria shall be considered as minimum requirements. Final calculations for the gangway systems, including all structural components of the systems, shall be designed for a minimum fifty-year life expectancy.
- B. Final calculations shall demonstrate that the gangways are designed to withstand the required loading without damage throughout the specified design life using the criteria specified in this section as a minimum standard. The load combinations and allowable

stresses are described herein.

- C. The project drawings show general layout and configuration of the gangway systems as well as required dimensions. Complete dimensions, which conform to these requirements, specific site conditions, and OSHA Regulations, will be required from the fabricator.
- D. ADA-gangways shall conform to the current ADA guidelines for floating dock boating facilities, including length, slope, walking surface, and railing. Non-ADA gangways shall conform to all ADA guidelines except for the slope/length requirement.
- E. The vertical design load shall be the combination of the dead weight of the structure and either live load Case A or Case B, whichever governs.
 - 1. Case A shall be a uniform live load of 100 pounds per square foot (psf) of deck surface area to be applied to the gangways.
 - 2. Case B shall be a concentrated live load of 400 pounds applied anywhere on the deck surface.
- F. The maximum allowable deflection under the vertical design load shall equal the span divided by 240.
- G. The deck and structural components shall be designed with a minimum safety factor on working stress as specified in AA “Aluminum Design Manual” for bridge type structures. For nonaluminum structural components, similar safety factors shall apply.
- H. The horizontal design load shall be a uniform wind load of 40 psf of profile area. The horizontal design load shall be applied in combination with the dead weight.
- I. Design shall also consider stresses resulting from handling and installation, and provide notations on how to lift, unload and set in place.
- J. The gangway systems design shall be coordinated with the float dock systems design. Provide sufficient flotation to support the superimposed load of the gangway plus any appurtenances to maintain required freeboard. Gangway System Aluminum Fabrications Wharf Marina Z-Dock – Maritime Package 05 60 00-3 July 22, 2016 – Issued for Bid
- K. The completed gangway systems shall have a manufacturer’s label plate attached in a conspicuous location. This label plate shall be aluminum, brass or stainless steel. The following information shall be stamped or etched into this plate in letters not less than 1/4 inch high filled with black enamel:
 - 1. Manufacturer's Name
 - 2. Date of Manufacture
 - 3. Overall Length
 - 4. Capacity (maximum live load)
- L. The walking surface shall be provided with a non-skid surface.
- M. The gangway systems shall have a guardrail and handrail on each side of the walking

- surface (not including the toe plate), designed in accordance with OSHA requirements. The rails shall be fabricated of aluminum pipe or tubing.
- N. The gangway systems shall be designed to withstand float motions including a vertical change in elevation due to water level fluctuation as indicated on the project drawings and horizontal drift without structure interference or overstress, including fatigue of gangway members and supports.
- O. The gangway toe plate shall make a smooth, gap-free transition between the gangway walking surface and the float. The toe plate shall be a minimum 1/4 inch material with a non-skid surface and shall be attached to the gangway by means of a continuous pipe hinge. The plate shall be the full width of the gangway and have a maximum slope not exceeding the maximum slope of the gangway.
- P. Wheels shall be installed at the float end of the gangway. The wheels shall have an allowable load rating greater than that required by the design loads. The gangway design shall allow the wheels to be supported by the floating dock at all times regardless of float motions.
- Q. The gangway hinge shall be supported by either the existing bulkhead, landing platform connected to the bulkhead, or a pile supported landing platform as indicated on the Contract Drawings. Capacity of the bulkhead to support the landing platform and/or gangway connection shall be confirmed by the Engineer. The hinge shall be designed to permit rotation of the gangway in both the vertical direction and the horizontal direction due to lateral loads on the float and shall accommodate float motions for all environmental conditions.
- R. The gangway hinge shall make a smooth, gap-free transition between the gangway walking surface and the landing platform. The hinge cover plate shall be a minimum 1/4 inch material with a non-skid surface and shall be attached to the gangway by means of a continuous pipe hinge. The plate shall be the full width of the gangway.
- S. The gangway system shall conform in all respects to design requirements of OSHA rules for marinas and local codes as applicable.
- T. The gangway shall be outfitted with low level LED rail lighting in accordance with standard supplied for gangway manufacturer or dock manufacturer.

1.05 SUBMITTALS

The following shall be submitted to the Owner's Engineer for approval:

A. SD-02 Shop Drawings

1. Gangway Platform Systems

Prior to ordering materials, or starting fabrication of the gangway systems, submit shop drawings signed and sealed by a registered Professional Engineer in the District of Columbia. The shop drawings shall indicate the proposed gangway system construction and connection details, and methods for attaching to the existing bulkhead. Submit shop drawings for all fabricated items and catalog sheets for all standard manufactured items

that are to be incorporated into the gangway system.

B. SD-05 Design Data

1. Design Computations

Prior to ordering materials or starting fabrication of the gangway systems, submit final design calculations signed and sealed by a registered Professional Engineer in the District of Columbia. The calculations shall demonstrate that the gangway system, using the criteria specified herein as minimum requirements, is designed to withstand the specified loads without damage throughout the design life of the gangway system.

1.06 WARRANTY

The gangway systems shall carry a manufacturer's written warranty against defects in materials and workmanship with a minimum term of one (1) year from date of project acceptance. The warranty shall clearly state its conditions and any exclusions from coverage.

PART 2 – PRODUCTS

2.01 MISCELLANEOUS METAL

A. Stainless steel hardware shall be Type 304 or 316. Bolts shall be ASTM F593, Group 2. Nuts shall be ASTM F594, Group 2. Flat washers shall be cut from Type 304 or 316 stainless steel plate that conforms to the provisions in ASTM A666.

2.02 GANGWAY SYSTEM

A. Aluminum shall be alloy 6061-T6 conforming to ASTM B308, or 6063-T6 conforming to the provisions in ASTM B221. Welding of aluminum shall comply with AWS D1.2.

B. Gangway wheel assembly shall consist of UHMW polyethylene roller, conforming to ASTM D4976. Axle shall be Type 316 stainless steel conforming to the provisions in ASTM A276.

2.03 DISSIMILAR MATERIALS

A. Where dissimilar metals are in contact, or where aluminum is in contact with concrete, masonry, wet or pressure-treated wood, or absorptive materials subject to wetting, the surfaces shall be protected with a coat of bituminous paint to prevent galvanic action.

PART 3 – EXECUTION

3.01 WORKMANSHIP

Gangway System Aluminum Fabrications Wharf Marina Z-Dock – Maritime Package 05 60 00-5
July 22, 2016 – Issued for Bid

A. All work shall conform to the approved shop drawings, project drawings and this specification. Construction details, finishing details and colors shall be consistent throughout. Work shall be accurately set to establish lines and elevations, and securely fastened in place. Cutting, drilling and punching shall produce clean true lines and surfaces. Exposed surfaces of work shall have a smooth finish.

3.02 GANGWAY and PLATFORM SYSTEM INSTALLATION

A. Install in accordance with the manufacturer's instructions. Posts and vertical rails shall be

plumb, and line rails level.

B. Contractor shall furnish all materials and equipment required for gangway system installation. The gangway shall not be dragged or skidded into place.

C. Contractor shall provide, install and remove when no longer required, all temporary supports used to secure the gangway in place during installation.

D. With the gangway secured in correct position, mark the location of the wheel guides and fasten in place.

E. Protect installed products until completion of project.

SECTION G. BUILDING SITEWORK

G10 SITE PREPARATIONS

1. **General Requirements:** Site work includes site preparation, site improvements, site civil/ utilities, site electrical utilities. Provide site work in accordance with UFC 3-201-01, *Civil Engineering*.
2. **Project Limitations:** Prior to the start of design, the contractor shall determine the exact limit-of-work line for the project periphery, considering items such as, but not limited to, utility work, landscape re-vegetation of disturbed areas, and lay down areas. The Civil/Structural Engineer of Record shall determine limit-of-work lines. Minimize the impact of construction activity on operations and neighboring facilities.
3. **Geotechnical Data:** A geotechnical engineer shall Review the subsurface data, evaluate and perform analysis that the Designer of Record deems necessary for the design and construction of the proposed facilities, including pedestrian gate and ramp and platforms structure.

G1010 SITE CLEARING:

1. **Existing Utilities:** When the Contractor is to work at a site that has existing utilities, the contractor is responsible for coordination with Town and utility companies for staking out, capping, and connection of any existing utility systems.
2. **Interruption:** All interruption to the existing utilities shall be coordinated with and approved by the Town not less than 10 calendar days in advance of such interruption.

G1020 SITE DEMOLITION & RELOCATIONS: N/A

G1030 SITE EARTHWORK: N/A

G20 SITE IMPROVEMENTS

Provide site improvements as required to make a useable facility that meets functional and

operational requirements, incorporates all applicable anti-terrorism, force protection and physical security requirements and blends into the existing environment.

Provide site improvements in conformance with applicable requirements of the Uniform Federal Accessibility Standards.

G30 SITE CIVIL/MECHANICAL UTILITIES: N/A

G40 SITE ELECTRICAL UTILITIES

G4010 ELECTRICAL DISTRIBUTION

1. **Electrical Utilities Design and Construction:** Site electrical utilities include all exterior electrical work, including the connection to the primary distribution system. This also includes telephone and cable television supplies.

Provide electrical overhead and underground, distribution systems in accordance with IEEE C2 (National Electrical Safety Code), NFPA 70, local utilities company requirements, and local Activity guidelines.

2. **Coordination with Local Utilities Company and Local Activity:** N/A
3. **Switches, Controls and Devices:** When switches or control devices are required, the Designer of Record shall utilize most recent codes

G4020 EXTERIOR LIGHTING FIXTURES AND CONTROLS

1. Comply with ANSI/ASHRAE/IES 90.1-2007 for all exterior lighting applications and controls.
2. Comply with EPACT 2005, the exterior lighting power density must be below ASHRAE by 30% if considered a building load and 20% if considered a non-building load.
3. When exterior lighting is required the designer of record shall utilize UFGS Section 26 51 00 for the project specification section as part of the design submittal for the project and shall submit the edited specification section as a part of the design submittal for the project.

G4030 SITE COMMUNICATION & SECURITY: N/A

PART 5 NOT USED

PART 6 ATTACHMENTS

1. 40UB MK 6 Spec 40ft Utility Boat Specifications (Pages 1-3)
2. 40UB86xx Outboard Profile & Arrangement (Pages 1-2)
3. 2381-Gangway Transition Plate (1 of 1)
4. B571-Nautilus Deck and Framing Plan (1 of 1)
5. B571-Nautilus Mooring General Sections (1 of 1)
6. B571-Nautilus Electrical Plan and Details
7. B571-Nautilus Sections and Details
8. Entry Gate Example
- 9a-e. Historical data Soil Borings-7-29-1983
10. Nautilus 2018 Hydrographic Survey
11. Nautilus Submarine Museum Water Taxi Dock
12. Pedestrian Gangway Details
13. Typical Power Pedestal Installation